

# **Arizona State Retirement System**

## **International Equity Asset Class Review**

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NEPC, LLC

# Contents

- **ASRS International Equity Asset Class Review (Aggregate)**
  - Asset Class Overview and Manager Mandates
  - Modifications made since last annual Board presentation
  - Asset Class Performance
  - NEPC Assessment of ASRS Managers
- **ASRS International Equity Asset Class Manager Review (Individual)**
  - Qualitative Analysis
    - People, Philosophy, Process
  - Quantitative Analysis
    - Rolling Excess Returns and Information Ratios
    - Risk Statistics – Peer Group Comparison

# **International Equity Asset Class Review (Aggregate)**

**Note: All of the data in this report is as of March 31, 2011, unless otherwise noted.**

# ASRS International Equity Asset Class Overview

- **Market Value: \$4.8B**

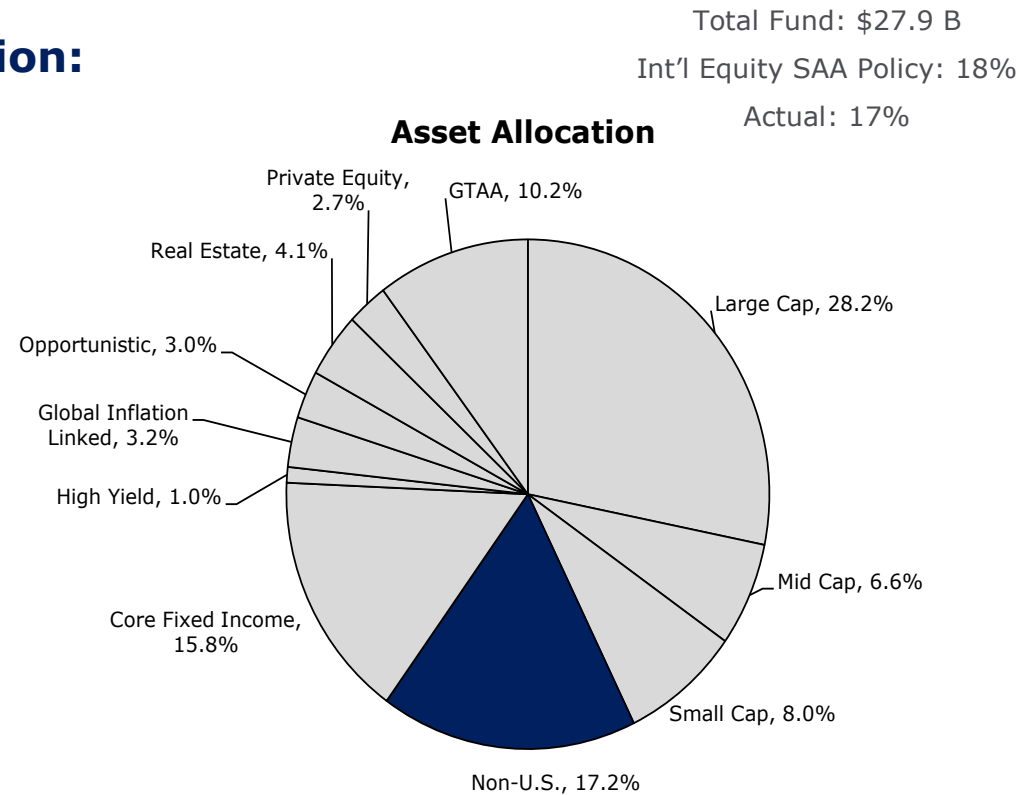
- **Active Style Composition:**

- Core: 9%
- Value: 50%
- Growth: 41%

- **Portfolios:**

- 3 Passive
- 9 Active:
  - Quantitative: 3
  - Fundamental: 6

- **Average Fees: 40 bps**



*Note: Domestic Equity, International Equity and Fixed Income allocations exclude GTAA portfolios.*

# ASRS International Equity Asset Class Mandates

Manager	Style	Benchmark	Inception Date	Expected Alpha (bps)	Portfolio Assets (\$MM)	Strategy Assets (\$MM)
<b>Active Int'l Large Cap Developed</b>						
Aberdeen	Value	MSCI EAFE	2/28/2011	300	\$401	\$4,467
Brandes	Value	MSCI EAFE	9/30/1998	250	\$415	\$24,103
Hansberger	Growth	MSCI EAFE	7/31/2005	300	\$451	\$5,879
Walter Scott	Growth	MSCI EAFE	3/31/2011	300	\$193	\$15,566
<b>Passive Int'l Large Cap Developed</b>						
BlackRock	Core	MSCI EAFE	5/31/2010	n/a	\$1,890	\$61,989
<b>Active Int'l Small Cap Developed</b>						
DFA	Value	MSCI EAFE Small Cap	8/31/2005	300	\$226	\$10,411
Franklin Templeton	Growth	MSCI EAFE Small Cap	3/31/2011	200	\$196	\$1,273
<b>Passive Int'l Small Cap Developed</b>						
BlackRock	Core	MSCI EAFE Small Cap	5/31/2010	n/a	\$120	\$845

# ASRS International Equity Asset Class Mandates

Manager	Style	Benchmark	Inception Date	Expected Alpha (bps)	Portfolio Assets (\$MM)	Strategy Assets (\$MM)
<b>Active Emerging Markets</b>						
Eaton Vance	Core	MSCI Emerging Markets	11/30/2010	250	\$234	\$9,904
LSV	Value	MSCI Emerging Markets	11/30/2010	350	\$179	\$3,463
William Blair	Growth	MSCI Emerging Markets	10/31/2010	150	\$166	\$4,005
<b>Passive Emerging Markets</b>						
BlackRock	Core	MSCI Emerging Markets	9/30/2010	n/a	\$306	\$11,429

# Modifications made since last annual Board presentation

- **Migrated ASRS International Equity Portfolio from its prior to existing Strategic Asset Allocation Policy (SAAP)**
  - 13% allocation to Int'l Developed Large Cap Equities; 2% Int'l Developed Small Cap Equities; 3% Emerging Markets, with each benchmarked to their respective MSCI index.
  - Previous SAAP target was also 18% of ASRS Assets, but was benchmarked in aggregate to MSCI ACWI x-U.S.
  - Result: Dedicated allocation to international equity sub-asset classes with lower market capitalization and emerging market exposure.
- **Transition Activities**
  - Three (3) asset class manager searches (LC, SC and EM) and subsequent portfolio transition primarily occurred in Q2 2010 through Q1 2011. Callan Associates assisted the Public Markets Committee in these searches.
  - Result: two (2) managers released, eight (8) new managers hired which includes both active managers and new BlackRock passive mandates.
  - Aberdeen (Int'l Large Cap Value) and Walter Scott (Int'l Large Cap Growth) were funded Q1 2011; both complement Brandes and Hansberger, respectively. BlackRock's ACWI x-US passive portfolio was transitioned to BlackRock's EAFE and BlackRock Emerging Market passive portfolios.
  - Franklin Templeton (Int'l Small Cap Growth) was funded Q1 2011 to complement DFA (Int'l Small Cap Value).
  - Eaton Vance (Core), LSV (Value) and William Blair (Growth) were hired/funded in Q4 2010 as new ASRS dedicated active emerging markets managers.
  - ASRS disaggregated its investment's in BlackRock's passive internal large and small-cap modules into investable individual country level constituents. Result: Enabled the ability to tactically manage the risk profile of ASRS international developed equity markets exposure.
- **Other Portfolio Activities**
  - Terminated AXA Rosenberg (AXA) Q2 2010 for cause. AXA breached fiduciary ethical responsibilities in failing to disclose promptly to clients a coding error in its quantitative portfolio model. Once AXA did reveal the error and circumstances surrounding it, staff recommended to the PMC, supported by NEPC, termination of the AXA mandate. Subsequently, ASRS received from AXA \$425K in damages as calculated by a third party independent assessor.

# Transition Snapshot – Before/After

## As of 03/31/2010

- **International Developed (\$3,539)**
  - Brandes (\$1,140)
  - Hansberger (\$667)
  - MFS (\$866)
  - BlackRock ACWI x US (\$622)
  - BlackRock MSCI EAFE (\$244)
- **International Small Cap (\$378)**
  - AXA Rosenberg (\$229)
  - DFA (\$149)

## As of 03/31/2011

- **International Developed (\$3,350)**
  - Aberdeen (\$401)
  - Brandes (\$415)
  - Hansberger (\$451)
  - Walter Scott (\$193)
  - BlackRock MSCI EAFE (\$1,890)
- **International Small Cap (\$542)**
  - DFA (\$226)
  - Franklin Templeton (\$196)
  - BlackRock MSCI EAFE Small Cap (\$120)
- **Emerging Markets (\$885)**
  - Eaton Vance (\$234)
  - LSV (\$179)
  - William Blair (\$166)
  - BlackRock Emerging Market (\$306)

Note: Terminated managers are in Red; Hired managers are in Blue

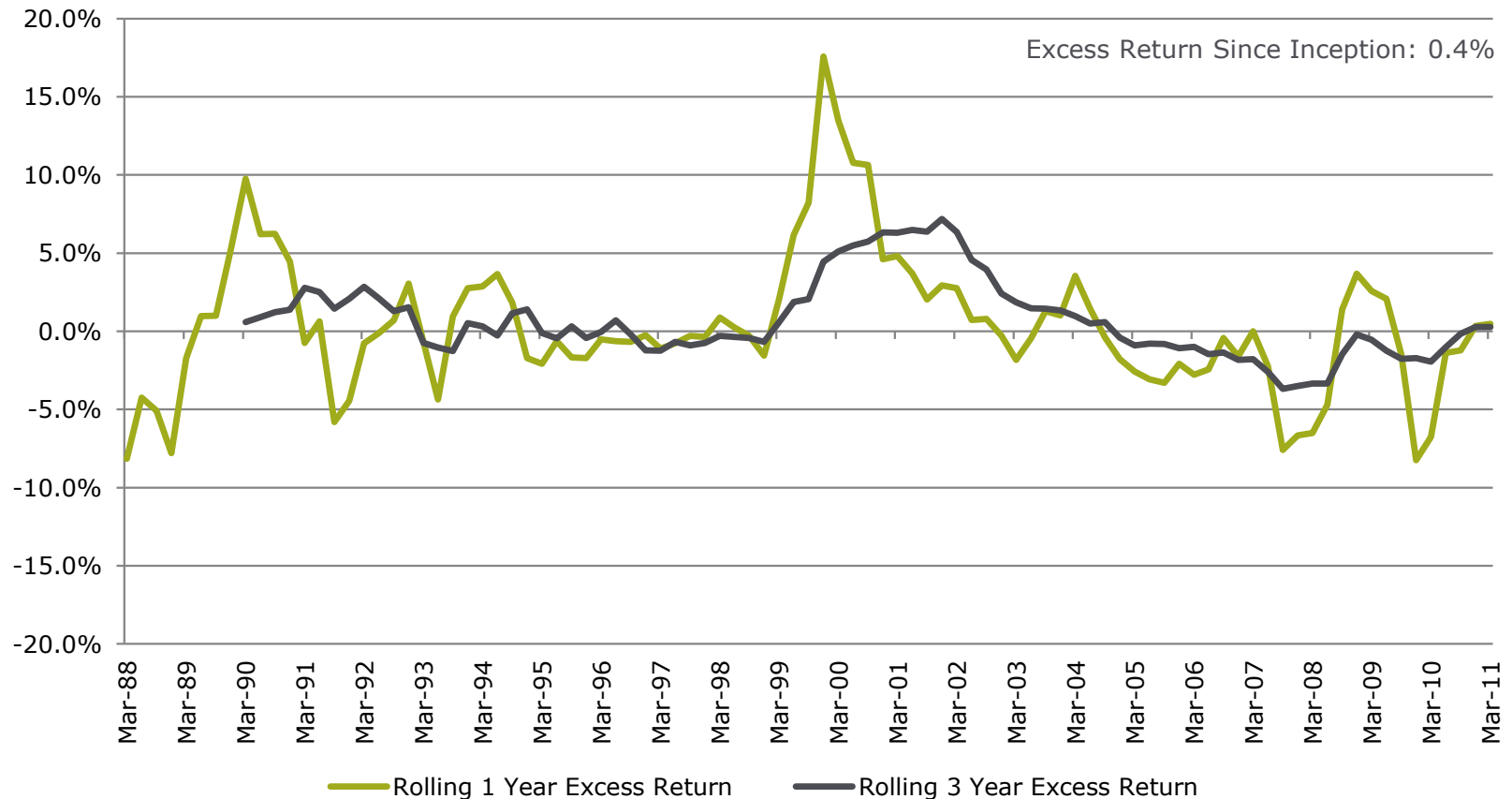
Values are actual market values as of the stated dates and displayed in millions.

The completion of the transition closely aligns the asset class with the current SAA Policy (13% MSCI EAFE, 2% MSCI EAFE Small Cap, 3% MSCI Emerging Markets)



# ASRS International Equity Rolling Excess Returns

ASRS Combined Int'l Equity vs. MSCI Custom Benchmark<sup>1</sup>  
Excess Returns Since Inception (March 1987) – March 31, 2011



<sup>1</sup>MSCI Custom Benchmark is a blend of the MSCI EAFE Index prior to 10/1/2005, the MSCI ACWI ex-U.S. Index from 10/1/2005 – 12/31/2010, and 72% MSCI EAFE/11% MSCI EAFE Small Cap/17% MSCI Emerging Markets from 1/1/2011 - present.

*Note: Based on quarterly, net of fee performance data, since inception.*

# ASRS International Equity Performance

	Ending Market Value	Last Quarter	Rank	Nine Months	Rank	One Year	Rank	Annualized Returns								Inception Date
								Three Years	Rank	Five Years	Rank	Ten Years	Rank	Since Inception		
<b>Total International Equity<sup>1</sup></b>	<b>\$4,780,737,288</b>	<b>3.2%</b>	<b>43</b>	<b>28.8%</b>	<b>39</b>	<b>13.8%</b>	<b>44</b>	<b>-0.2%</b>	<b>48</b>	<b>2.8%</b>	<b>55</b>	<b>6.2%</b>	<b>83</b>	<b>6.7%</b>	<b>Mar-87</b>	
MSCI Custom Benchmark <sup>2</sup>		3.2%		29.2%		13.3%		-0.5%		4.0%		7.0%		6.3%		
<b>Performance Variance (Return - Benchmark)</b>		<b>-0.1%</b>		<b>-0.4%</b>		<b>0.5%</b>		<b>0.3%</b>		<b>-1.2%</b>		<b>-0.8%</b>		<b>0.4%</b>		
ICC Combined Int'l Equity Funds Median		2.9%		28.3%		13.7%		-0.1%		3.6%		8.4%		--		
<b>Total International Developed Markets Equity<sup>3</sup></b>	<b>\$3,894,650,868</b>	<b>3.6%</b>	<b>32</b>	<b>29.7%</b>	<b>30</b>	<b>14.6%</b>	<b>31</b>	<b>0.1%</b>	<b>38</b>	<b>3.0%</b>	<b>45</b>	<b>6.3%</b>	<b>81</b>	<b>6.7%</b>	<b>Mar-87</b>	
MSCI Custom Benchmark <sup>2</sup>		3.2%		29.2%		13.3%		-0.5%		4.0%		7.0%		6.3%		
<b>Performance Variance (Return - Benchmark)</b>		<b>0.4%</b>		<b>0.5%</b>		<b>1.3%</b>		<b>0.5%</b>		<b>-1.0%</b>		<b>-0.7%</b>		<b>0.5%</b>		
ICC Int'l Developed Markets Equity Funds Median		3.4%		28.4%		13.3%		-0.7%		3.1%		8.1%		--		
ACTIVE LARGE CAP INTERNATIONAL EQUITY																
<b>Aberdeen</b>	<b>\$400,973,033</b>	<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>-0.4%</b>	<b>Feb-11</b>	
MSCI EAFE		3.4%		28.6%		10.9%		-2.5%		1.8%		5.8%		-2.2%		
<b>Performance Variance (Return - Primary Benchmark)</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>1.8%</b>		
<b>Brandes</b>	<b>\$415,132,289</b>	<b>3.3%</b>	<b>46</b>	<b>21.6%</b>	<b>95</b>	<b>8.6%</b>	<b>88</b>	<b>-1.4%</b>	<b>55</b>	<b>1.3%</b>	<b>79</b>	<b>7.1%</b>	<b>65</b>	<b>10.3%</b>	<b>Sep-98</b>	
Brandes Custom Benchmark <sup>4</sup>		1.4%		26.9%		11.3%		-1.1%		3.6%		6.8%		6.6%		
MSCI ACWI ex-U.S. Value		4.7%		29.2%		12.1%		-0.1%		3.9%		8.7%		9.1%		
<b>Performance Variance (Return - Primary Benchmark)</b>		<b>1.9%</b>		<b>-5.2%</b>		<b>-2.7%</b>		<b>-0.4%</b>		<b>-2.3%</b>		<b>0.2%</b>		<b>3.7%</b>		
<b>Hansberger</b>	<b>\$451,187,219</b>	<b>3.2%</b>	<b>31</b>	<b>28.6%</b>	<b>34</b>	<b>12.1%</b>	<b>53</b>	<b>-1.0%</b>	<b>46</b>	<b>3.8%</b>	<b>34</b>	<b>n/a</b>		<b>7.0%</b>	<b>Jul-05</b>	
Hansberger Custom Benchmark <sup>5</sup>		1.4%		26.9%		11.3%		-1.1%		3.6%		n/a		7.1%		
MSCI ACWI ex-U.S. Growth		2.3%		29.7%		15.1%		-0.7%		4.2%		6.9%		7.7%		
<b>Performance Variance (Return - Primary Benchmark)</b>		<b>1.7%</b>		<b>1.7%</b>		<b>0.8%</b>		<b>0.0%</b>		<b>0.1%</b>		<b>n/a</b>		<b>-0.2%</b>		
<b>Walter Scott</b>	<b>\$193,044,295</b>	<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>	<b>Mar-11</b>	
MSCI EAFE		3.4%		28.6%		10.9%		-2.5%		1.8%		5.8%		n/a		
<b>Performance Variance (Return - Primary Benchmark)</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		
PASSIVE LARGE CAP INTERNATIONAL EQUITY																
<b>BlackRock EAFE Equity Index</b>	<b>\$1,890,218,980</b>	<b>3.5%</b>	<b>47</b>	<b>28.5%</b>	<b>45</b>	<b>10.9%</b>	<b>72</b>	<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>19.5%</b>	<b>Jun-09</b>	
MSCI EAFE		3.4%		28.6%		10.9%		-2.5%		1.8%		5.8%		19.6%		
<b>Performance Variance (Return - Benchmark)</b>		<b>0.0%</b>		<b>0.0%</b>		<b>0.0%</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>-0.1%</b>		
ACTIVE SMALL CAP INTERNATIONAL EQUITY																
<b>DFA</b>	<b>\$225,823,163</b>	<b>5.0%</b>	<b>10</b>	<b>34.7%</b>	<b>7</b>	<b>17.8%</b>	<b>11</b>	<b>0.7%</b>	<b>26</b>	<b>3.1%</b>	<b>38</b>	<b>n/a</b>		<b>6.5%</b>	<b>Aug-05</b>	
MSCI EAFE Small Cap		3.0%		35.4%		20.3%		1.8%		1.7%		11.0%		5.6%		
<b>Performance Variance (Return - Benchmark)</b>		<b>2.0%</b>		<b>-0.7%</b>		<b>-2.5%</b>		<b>-1.0%</b>		<b>1.4%</b>		<b>n/a</b>		<b>1.0%</b>		
<b>Franklin Templeton</b>	<b>\$195,912,974</b>	<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>	<b>Mar-11</b>	
MSCI EAFE Small Cap		3.0%		35.4%		20.3%		1.8%		1.7%		11.0%		n/a		
<b>Performance Variance (Return - Benchmark)</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		
PASSIVE SMALL CAP INTERNATIONAL EQUITY																
<b>BlackRock EAFE Small Cap Equity Index</b>	<b>\$120,622,137</b>	<b>3.0%</b>	<b>58</b>	<b>35.3%</b>	<b>7</b>	<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>35.1%</b>	<b>May-10</b>	
MSCI EAFE Small Cap		3.0%		35.4%		20.3%		1.8%		1.7%		11.0%		34.9%		
<b>Performance Variance (Return - Benchmark)</b>		<b>0.0%</b>		<b>-0.2%</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>0.2%</b>		
ICC Non-U.S. Developed Markets Equity Funds Median		3.4%		28.4%		13.3%		-0.7%		3.1%		8.1%		--		

<sup>1</sup>Total International Equity market value includes \$2,577,515 of residual cash remaining in terminated manager accounts (AXA Rosenberg, BlackRock ACWI ex-US and Int'l Transition accounts).

<sup>2</sup>MSCI Custom Benchmark is a blend of the MSCI EAFE Index prior to 10/1/2005, the MSCI ACWI ex-U.S. Index from 10/1/2005 - 12/31/2010, and 72% MSCI EAFE/11% MSCI EAFE Small Cap/17% MSCI Emerging Markets from 1/1/2011 - present.

<sup>3</sup>Total International Developed Markets Equity market value includes \$1,736,778 of residual cash remaining in terminated manager accounts (AXA Rosenberg, BlackRock ACWI ex-US).

<sup>4</sup>Brandes Custom Benchmark is a blend of the MSCI EAFE Index prior to 10/1/2005, the MSCI ACWI ex-U.S. Index from 10/1/2005 - 2/28/2011, and the MSCI EAFE Index from 3/1/2011 - present.

<sup>5</sup>Hansberger Custom Benchmark is a blend of the MSCI ACWI ex-U.S. prior to 3/1/2011, and the MSCI EAFE Index from 3/1/2011 - present.

Note: Performance is reported net of fees. Ranks and ICC medians are based on gross of fee performance data.

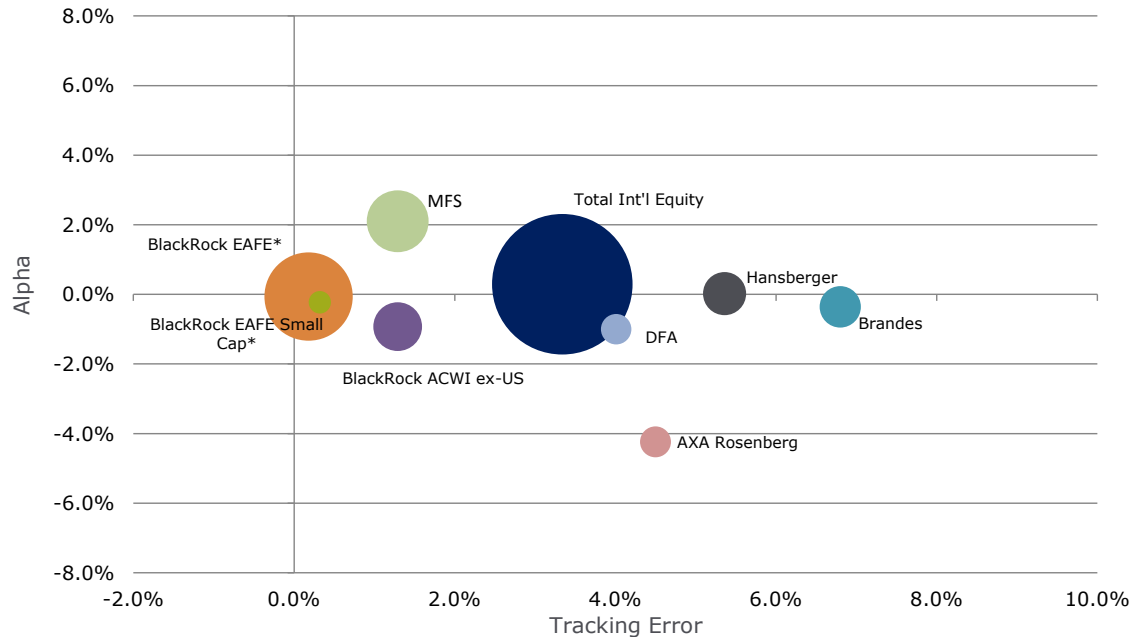
# ASRS International Equity Performance

		Annualized Returns													
		Ending Market Value	Last Quarter	Rank	Nine Months	Rank	One Year	Rank	Three Years	Rank	Five Years	Rank	Ten Years	Rank	Since Inception
<b>Total International Emerging Markets Equity</b>	<b>\$885,245,683</b>	<b>1.5%</b>	<b>37</b>	<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>6.5%</b>	<b>Sep-10</b>
MSCI Emerging Markets Index		2.1%		29.5%		18.8%		4.6%		11.0%		17.1%		9.6%	
<b>Performance Variance (Return - Benchmark)</b>		<b>-0.6%</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>-3.1%</b>	
ICC Int'l Emerging Markets Equity Funds Median		0.9%		27.6%		17.9%		4.7%		10.5%		18.6%		--	
ACTIVE EMERGING MARKETS EQUITY															
<b>Eaton Vance</b>	<b>\$234,390,227</b>	<b>0.7%</b>	<b>56</b>	<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>7.1%</b>	<b>Nov-10</b>
MSCI Emerging Markets Index		2.1%		29.5%		18.8%		4.6%		11.0%		17.1%		9.4%	
<b>Performance Variance (Return - Benchmark)</b>		<b>-1.4%</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>-2.3%</b>	
<b>LSV</b>	<b>\$179,558,438</b>	<b>4.2%</b>	<b>8</b>	<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>11.0%</b>	<b>Nov-10</b>
MSCI Emerging Markets Index		2.1%		29.5%		18.8%		4.6%		11.0%		17.1%		9.4%	
<b>Performance Variance (Return - Benchmark)</b>		<b>2.1%</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>1.6%</b>	
<b>William Blair</b>	<b>\$165,654,293</b>	<b>-1.0%</b>	<b>84</b>	<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>0.8%</b>	<b>Oct-10</b>
MSCI Emerging Markets Index		2.1%		29.5%		18.8%		4.6%		11.0%		17.1%		6.5%	
<b>Performance Variance (Return - Benchmark)</b>		<b>-3.1%</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>-5.7%</b>	
ICC Int'l Emerging Markets Equity Funds Median		0.9%		27.6%		17.9%		4.7%		10.5%		18.6%		--	
PASSIVE EMERGING MARKETS EQUITY															
<b>BlackRock Emerging Markets Equity Index</b>	<b>\$305,642,725</b>	<b>2.0%</b>	<b>27</b>	<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>9.5%</b>	<b>Sep-10</b>
MSCI Emerging Markets Index		2.1%		29.5%		18.8%		4.6%		11.0%		17.1%		9.6%	
<b>Performance Variance (Return - Benchmark)</b>		<b>-0.1%</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>n/a</b>		<b>-0.1%</b>	
ICC Int'l Emerging Markets Equity Funds Median		0.9%		27.6%		17.9%		4.7%		10.5%		18.6%		--	

Note: Performance is reported net of fees. Ranks and ICC medians are based on gross of fee performance data.

# ASRS International Developed Markets Equity Volatility/Return

Volatility/Return Bubble Chart  
For the 3 year period ending March 31, 2011



Manager	Portfolio Assets (\$MM)	Inception Date	Alpha	Tracking Error	Information Ratio
Brandes	\$415.1	9/30/1998	-0.4%	6.8%	0.0
Hansberger	\$451.2	7/31/2005	0.0%	5.4%	0.0
MFS	\$924.6	7/31/2005	2.1%	5.4%	0.4
BlackRock ACWI ex-US	\$575.5	9/30/2005	-0.9%	1.3%	-0.7
BlackRock EAFE*	\$1,890.2	6/30/2009	-0.1%	0.2%	-0.3
DFA	\$225.8	8/31/2005	-1.0%	4.0%	-0.3
AXA Rosenberg	\$230.2	8/31/2005	-4.2%	4.5%	-0.9
BlackRock EAFE Small Cap*	\$120.6	5/31/2010	-0.2%	0.3%	-0.8
<b>Total Int'l Equity</b>	<b>\$4,780.7</b>	<b>3/31/1987</b>	<b>0.3%</b>	<b>3.3%</b>	<b>0.1</b>

\*Represents managers with less than three years of performance data; composite performance has been linked to ASRS portfolio performance.  
MFS, AXA Rosenberg, and BlackRock ACWI ex-US have been released as ASRS managers, but are shown as each impacted the Int'l Equity results.  
BlackRock EAFE (Composite performance January 1986 – portfolio inception June 2009).  
BlackRock EAFE Small Cap (Composite performance October 2007 – May 2010).

# Active Manager Assessment (NEPC)

Manager	Strategy	Conviction Level	NEPC Focused Placement List Strategy
Aberdeen	Active Int'l Large Cap Core	Mild	No
Brandes	Active Int'l Large Cap Value	Mild	No
Hansberger	Active Int'l Large Cap Growth	High	Yes
Walter Scott	Active Int'l Large Cap Growth	High	Yes
DFA	Active Int'l Small Cap Value	High	Yes
Franklin Templeton	Active Int'l Small Cap Growth	Mild	No
Eaton Vance	Active Emerging Markets Core	High	Yes
LSV	Active Emerging Markets Value	High	No <sup>1</sup>
William Blair	Active Emerging Markets Growth	High	Yes

"High Conviction Level" strategies denote NEPC's belief that the manager has above average prospects of generating alpha going forward.

"Mild Conviction Level" strategies denote NEPC's belief that the manager has average prospects of generating alpha going forward.

"Low Conviction Level" strategies denote NEPC's belief that the manager has below average prospects of generating alpha going forward.

NEPC's Focused Placement List represents internally vetted managers and strategies we put forward to clients who are conducting a search. Criteria for inclusion vary per asset class.

<sup>1</sup>LSV's Emerging Markets Value Equity strategy is currently closed to new investors.

# **International Equity Manager Reviews (Individual)**

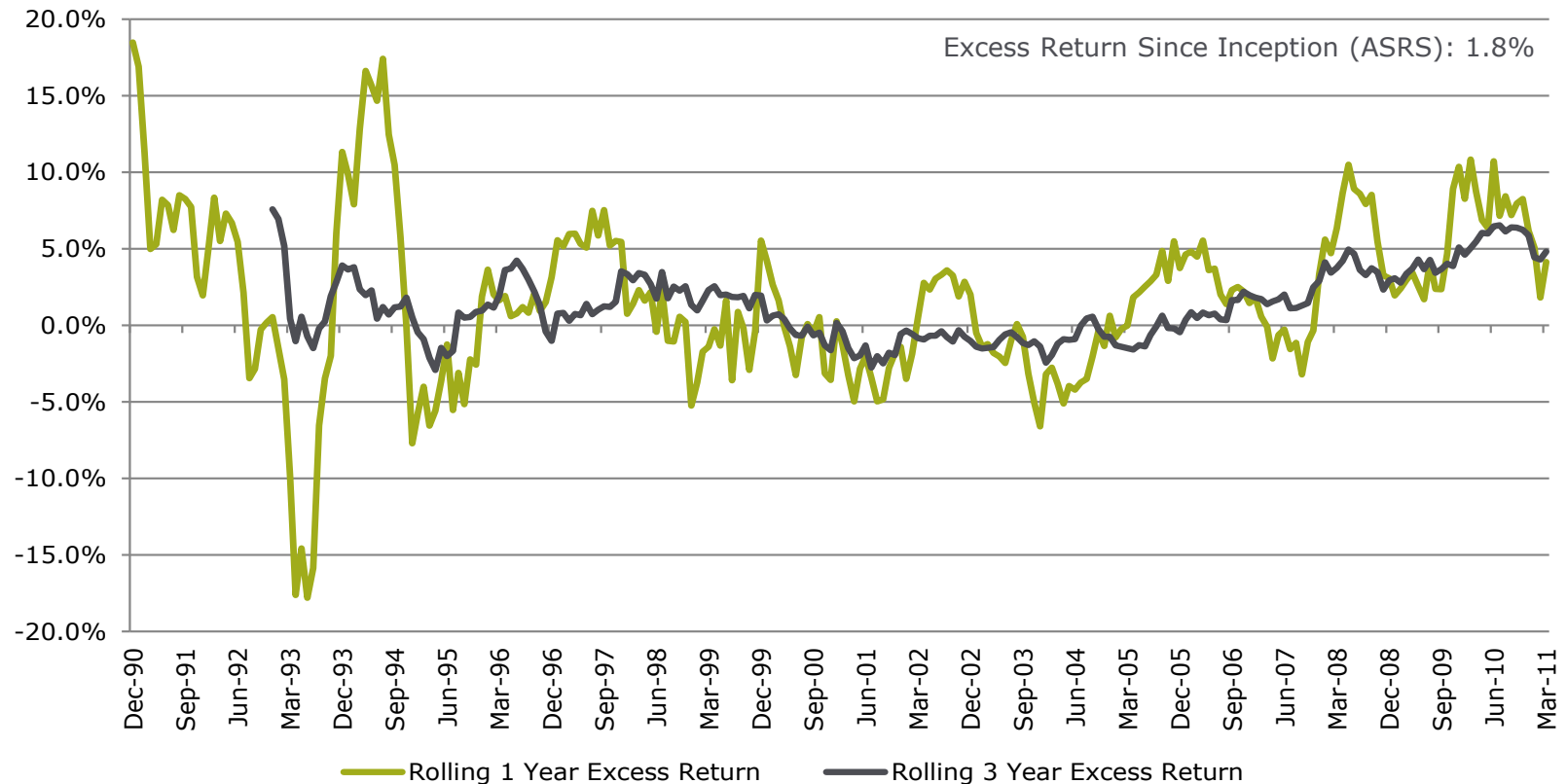
**Note: All of the data in this report is as of March 31, 2011, unless otherwise noted.**

# Aberdeen Asset Management PLC

Factors	Description
People	<ul style="list-style-type: none"><li>•Experienced team of 14 investment professionals led by Stephen Docherty, who has been with the firm since 1994.</li><li>•Global Equity Team averages 16 years experience and 14 years with Aberdeen.</li><li>•The team is supported by 75 regional team members located in investment offices in London, Edinburgh, Philadelphia, Sao Paulo, Singapore, Bangkok, Hong Kong, Sydney, Kuala Lumpur and Tokyo.</li></ul>
Philosophy	<ul style="list-style-type: none"><li>•Believe that given the inefficiency of markets, competitive long-term returns are achieved by identifying high quality stocks at attractive valuations and holding for the long term. Aberdeen believes sound fundamentals drive stock prices over time.</li><li>•The team employs a fundamental, bottom-up investment approach based upon a rigorous and disciplined proprietary research effort which originates with direct company due diligence visits.</li></ul>
Process	<ul style="list-style-type: none"><li>•Bottom-up process based on a disciplined evaluation of companies through direct visits.</li><li>•Rely on proprietary research and do not invest in a company prior to meeting company management.</li><li>•Estimate a company's worth in two stages: first quality, then price.</li><li>•Build high conviction, diversified portfolios.</li><li>•Hold securities for the long term.</li></ul>

# Aberdeen Asset Management PLC

## Aberdeen vs. MSCI EAFE Excess Returns Since Inception (December 1989)<sup>1</sup> – March 31, 2011



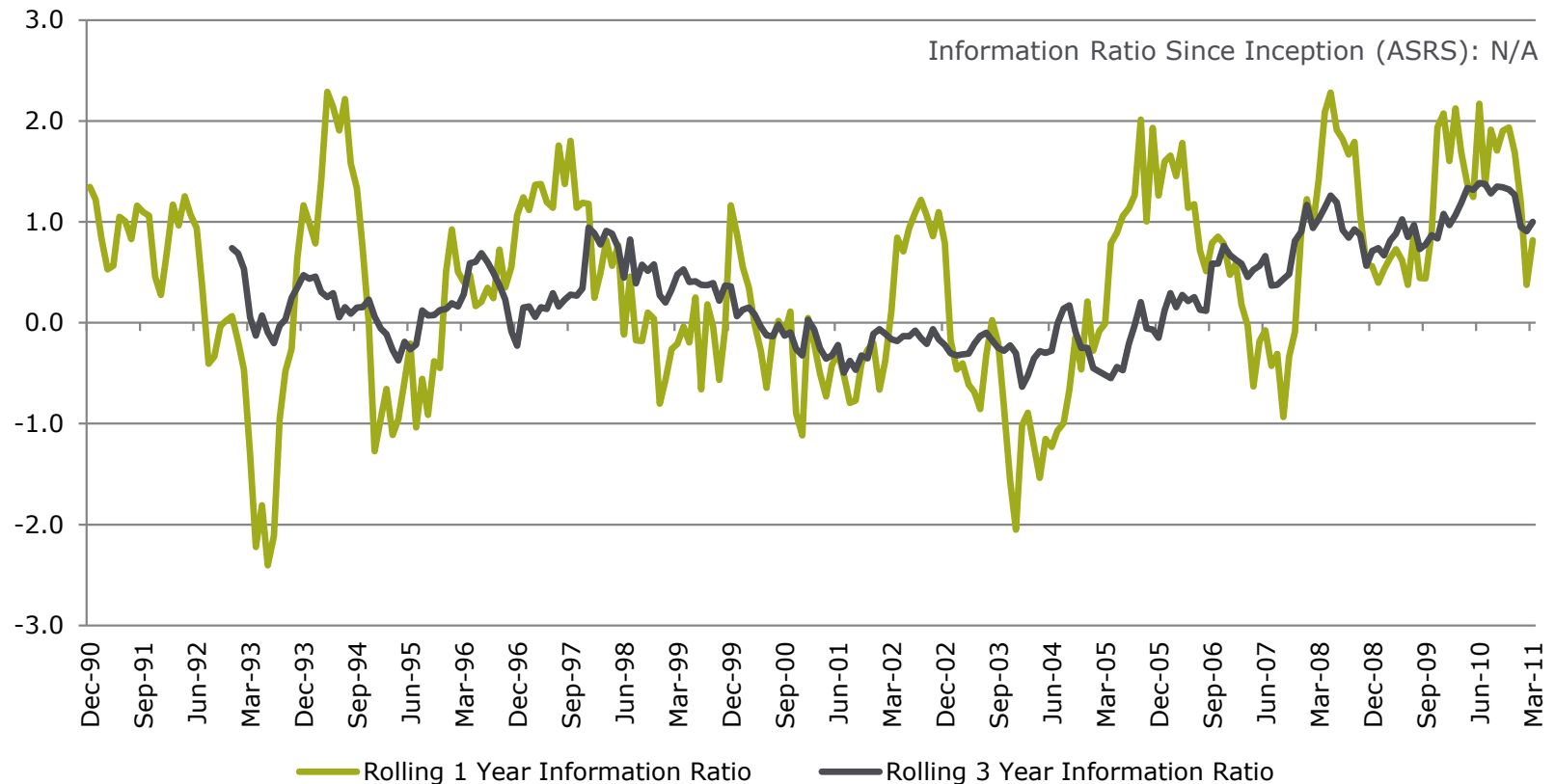
<sup>1</sup>Net of fee performance of the Aberdeen EAFE Plus Equity Composite is linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is February 28, 2011.

*Note: Based on monthly, net of fee performance data, since inception.*



# Aberdeen Asset Management PLC

## Aberdeen vs. MSCI EAFE Information Ratios Since Inception (December 1989)<sup>1</sup> – March 31, 2011



<sup>1</sup>Net of fee performance of the Aberdeen EAFE Plus Equity Composite is linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is February 28, 2011.

*Note: Based on monthly, net of fee performance data, since inception.*

# Aberdeen Asset Management PLC

## Aberdeen vs. MSCI EAFE

### Risk and Return Characteristics vs. International Large Cap Equity Universe

For the three-year period ending March 31, 2011<sup>1</sup>



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
Aberdeen	5.3%	27.0%	4.8%	1.1	0.1	1.0
Rank	10	68	55	5	10	32
5th Percentile	6.6%	22.2%	9.3%	1.1	0.1	1.2
Upper Quartile	3.5%	25.0%	6.5%	0.6	0.0	1.0
Median	1.1%	26.3%	5.0%	0.2	-0.1	1.0
Lower Quartile	-0.9%	27.8%	4.0%	-0.2	-0.1	0.9
95th Percentile	-3.9%	30.6%	2.5%	-0.8	-0.3	0.8
Observations	284	284	284	284	284	284

<sup>1</sup>Gross of fee performance of the Aberdeen EAFE Plus Equity Composite is linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is February 28, 2011.

Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of March 31, 2011.

## Brandes Investment Partners, LP

Factors	Description
People	<ul style="list-style-type: none"> <li>• Research is driven by analysts who are allocated across 7 global industry research teams.</li> <li>• Investment Committee responsible for investment decisions and portfolio construction.</li> <li>• Stable team, low turnover among investment professionals.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>• Seek to identify the intrinsic value of a business through Graham &amp; Dodd, value-oriented, bottom-up fundamental analysis.</li> <li>• Volatility in the market creates market inefficiencies and opportunities to buy securities at a discount to intrinsic value.</li> </ul>
Process	<ul style="list-style-type: none"> <li>• Initial candidates are identified by the global analyst group, who screen the universe for low valuation ratios, liquidity, and market capitalization. In addition to these screens, analysts will review third party research reports, monitor financial news sources, consult outside contacts, review regulatory filings, etc.</li> <li>• Candidates are reviewed with the primary emphasis on financial statement analysis.</li> <li>• Weightings for sectors, regions, etc. result from individual companies trading at significant discounts to the firm's estimate of their intrinsic value, although there are limits to reduce risk and ensure diversification.</li> <li>• Ideas are presented to the firm's Investment Committee, where product level purchase and sales decisions are made.</li> <li>• Brandes has a more concentrated portfolio (35-85 securities), which could result in higher tracking error.</li> <li>• Low portfolio turnover given long term investment horizon.</li> </ul>

# Brandes Investment Partners, LP

Brandes vs. Brandes Custom Benchmark<sup>1</sup>  
Excess Returns Since Inception (September 1998) – March 31, 2011

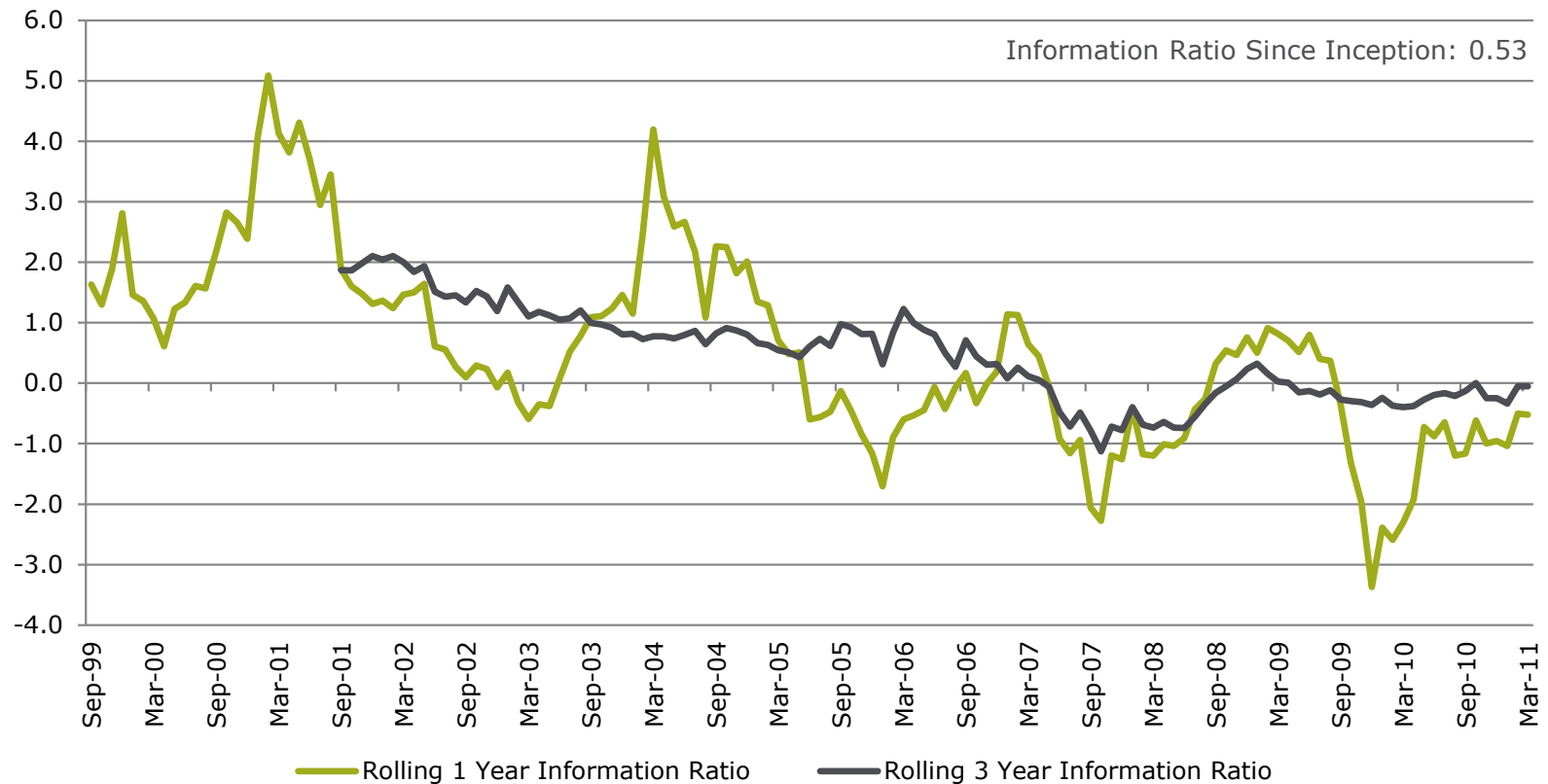


<sup>1</sup>Brandes Custom Benchmark is a blend of the MSCI EAFE Index prior to 10/1/2005, the MSCI ACWI ex-U.S. Index from 10/1/2005 – 2/28/2011, and the MSCI EAFE Index from 3/1/2011 – present.

Note: Based on monthly, net of fee performance data, since inception.

# Brandes Investment Partners, LP

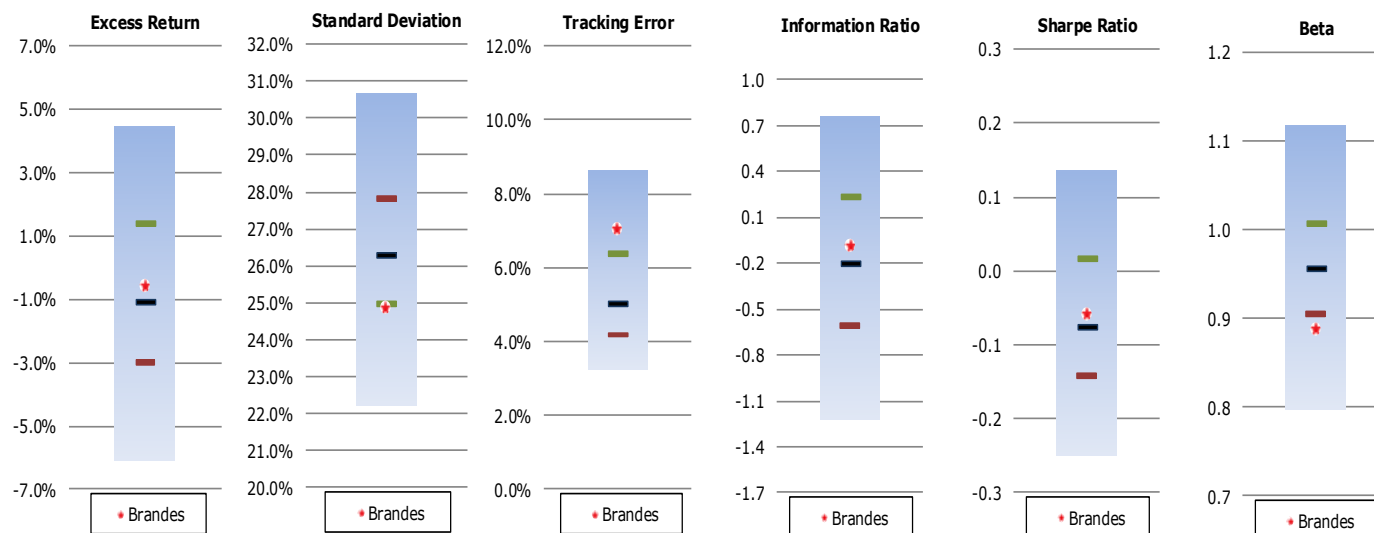
Brandes vs. Brandes Custom Benchmark<sup>1</sup>  
Information Ratios Since Inception (September 1998) – March 31, 2011



<sup>1</sup>Brandes Custom Benchmark is a blend of the MSCI EAFE Index prior to 10/1/2005, the MSCI ACWI ex-U.S. Index from 10/1/2005 – 2/28/2011, and the MSCI EAFE Index from 3/1/2011 – present.  
Note: Based on monthly, net of fee performance data, since inception.

# Brandes Investment Partners, LP

## Brandes vs. Brandes Custom Benchmark<sup>1</sup> Risk and Return Characteristics vs. International Large Cap Equity Universe For the three-year period ending March 31, 2011



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
Brandes	-0.6%	24.9%	7.0%	-0.1	-0.1	0.9
Rank	45	24	17	43	45	82
5th Percentile	4.5%	22.2%	8.7%	0.8	0.1	1.1
Upper Quartile	1.4%	25.0%	6.4%	0.2	0.0	1.0
<b>Median</b>	<b>-1.1%</b>	<b>26.3%</b>	<b>5.0%</b>	<b>-0.2</b>	<b>-0.1</b>	<b>1.0</b>
Lower Quartile	-3.0%	27.8%	4.2%	-0.6	-0.1	0.9
95th Percentile	-6.1%	30.6%	3.3%	-1.2	-0.3	0.8
Observations	284	284	284	284	284	284

<sup>1</sup>Brandes Custom Benchmark is a blend of the MSCI EAFE Index prior to 10/1/2005, the MSCI ACWI ex-U.S. Index from 10/1/2005 – 2/28/2011, and the MSCI EAFE Index from 3/1/2011 – present. Risk statistics shown above are against the MSCI ACWI ex-U.S. Index for the entire three-year period for purposes of this analysis.

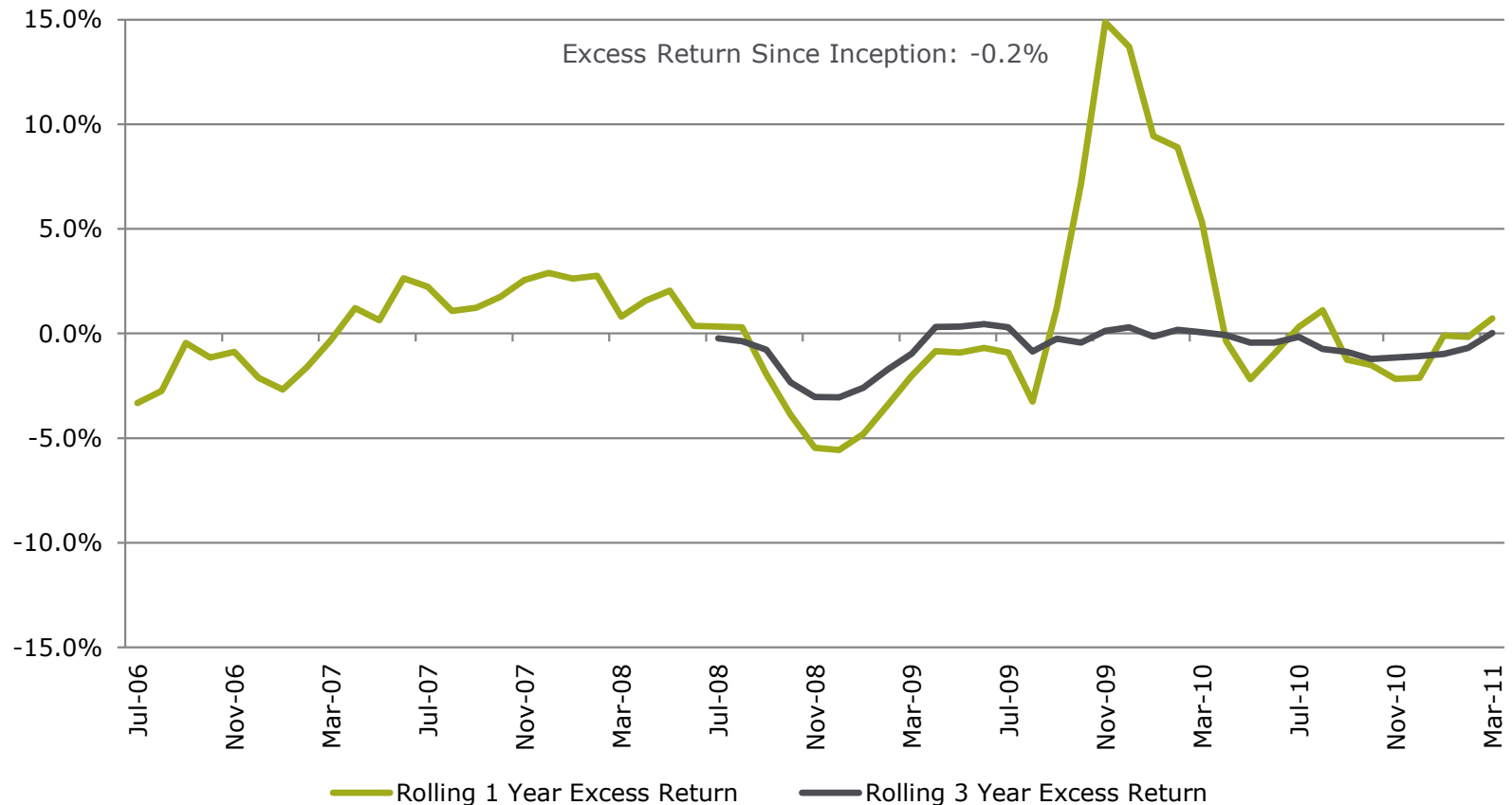
*Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of March 31, 2011.*

# Hansberger Global Investors, Inc.

Factors	Description
People	<ul style="list-style-type: none"><li>•Team-based approach, investment professionals and industry analysts provide ideas; however, CIO has ultimate decision-making authority, backed up by the Portfolio Management team.</li><li>•Stable team, low turnover among investment professionals.</li></ul>
Philosophy	<ul style="list-style-type: none"><li>•Strategy focuses on companies that have a competitive market advantage and exhibit above average growth prospects, trading at attractive valuations.</li></ul>
Process	<ul style="list-style-type: none"><li>•Quantitative screens of a universe of roughly 10,000 names are used to identify the "Star List", which consists of approximately 500 stocks with superior profitability, secular growth, sustainable competitive advantage, and strong capital structure. The screens are intended to identify those companies that have consistently been industry and market leaders.</li><li>•The "Star List" is rated based on relative valuation and price momentum; the top 100-125 stocks are considered for portfolio inclusion.</li><li>•Fundamental analysis is used to further refine the list and identify any issues the quantitative approach may have overlooked.</li><li>•The final portfolio is concentrated, typically holding approximately 60-70 securities.</li></ul>

# Hansberger Global Investors, Inc.

## Hansberger vs. Hansberger Custom Benchmark<sup>1</sup> Excess Returns Since Inception (July 2005) – March 31, 2011



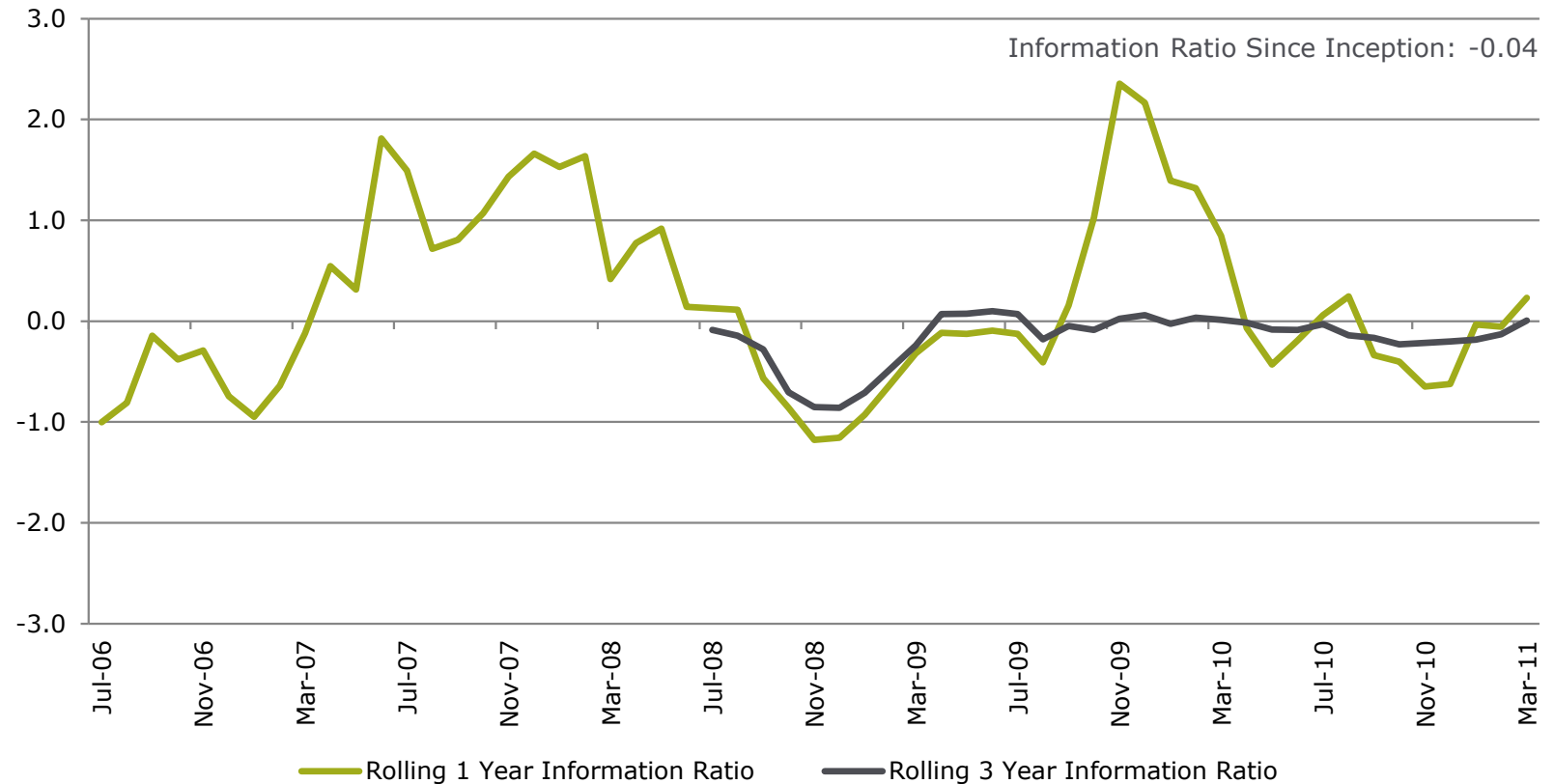
<sup>1</sup>Hansberger Custom Benchmark is a blend of the MSCI ACWI ex-U.S. Index prior to 3/1/2011, and the MSCI EAFE Index from 3/1/2011 – present.

*Note: Based on monthly, net of fee performance data, since inception.*



# Hansberger Global Investors, Inc.

## Hansberger vs. Hansberger Custom Benchmark<sup>1</sup> Information Ratios Since Inception (July 2005) – March 31, 2011

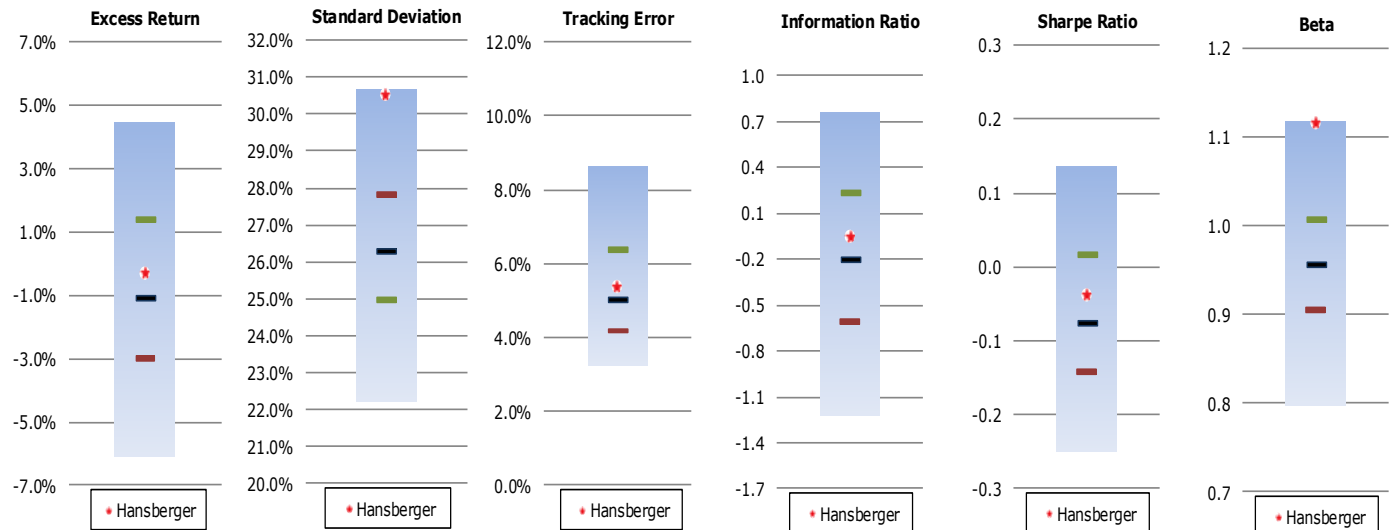


<sup>1</sup>Hansberger Custom Benchmark is a blend of the MSCI ACWI ex-U.S. Index prior to 3/1/2011, and the MSCI EAFE Index from 3/1/2011 – present.

*Note: Based on monthly, net of fee performance data, since inception.*

# Hansberger Global Investors, Inc.

## Hansberger vs. Hansberger Custom Benchmark<sup>1</sup> Risk and Return Characteristics vs. International Large Cap Equity Universe For the three-year period ending March 31, 2011



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
Hansberger	-0.3%	30.5%	5.4%	-0.1	0.0	1.1
Rank	42	95	42	41	39	5
5th Percentile	4.5%	22.2%	8.7%	0.8	0.1	1.1
Upper Quartile	1.4%	25.0%	6.4%	0.2	0.0	1.0
<b>Median</b>	<b>-1.1%</b>	<b>26.3%</b>	<b>5.0%</b>	<b>-0.2</b>	<b>-0.1</b>	<b>1.0</b>
Lower Quartile	-3.0%	27.8%	4.2%	-0.6	-0.1	0.9
95th Percentile	-6.1%	30.6%	3.3%	-1.2	-0.3	0.8
Observations	284	284	284	284	284	284

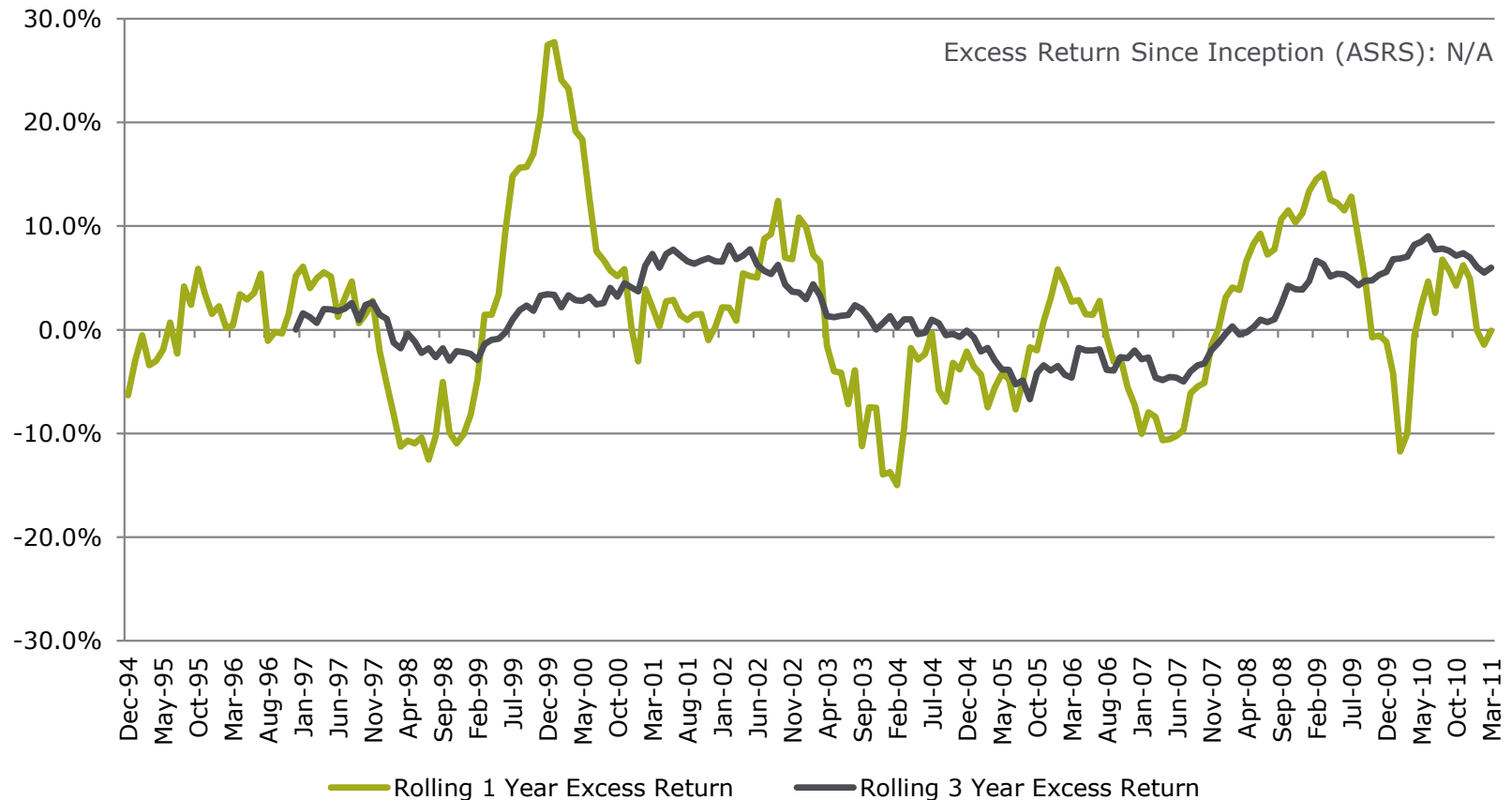
<sup>1</sup>Hansberger Custom Benchmark is a blend of the MSCI ACWI ex-U.S. Index prior to 3/1/2011, and the MSCI EAFE Index from 3/1/2011 – present. Risk statistics shown above are against the MSCI ACWI ex-U.S. Index for the entire three-year period for purposes of this analysis. Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of March 31, 2011.

# Walter Scott & Partners Limited

Factors	Description
People	<ul style="list-style-type: none"> <li>•Walter Scott's investment professionals work closely together as a team in an open and collegiate environment. Irrespective of mandate, every portfolio is managed by bringing together the skill, judgment and experience of the investment team. Senior investment professionals have an average tenure of 18 years with the firm.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>•The firm's core conviction is that over the long term, return to shareholders can only ever be as great as the wealth generated by the underlying businesses in which they are invested. Therefore, the primary task is to identify those companies capable of sustaining the highest rates of wealth generation. Walter Scott does so using original, fundamental research carried out by the firm's own investment team across an investment universe that is unrestricted by region, market sector or benchmark.</li> </ul>
Process	<ul style="list-style-type: none"> <li>•Walter Scott's fundamental, bottom-up investment approach combines detailed financial research with business and industry analysis. Meetings with company management are central to the process. Over 600 companies are met face-to-face per annum.</li> <li>•Some consideration is given to a company's economic and political environment, however, fundamentals are what primarily dictate investment decisions. Growth, margin structure, internal cash generation, balance sheet strength, market leadership, barriers to entry and sustainability of the business franchise are typical examples of the investment focus.</li> <li>•The investment team meets formally three times each week to review stocks and debate new ideas. Its goal is to find, buy and hold around 50 great stocks with longevity of compound growth. It is a careful, thorough, exacting and meticulous process.</li> </ul>

# Walter Scott & Partners Limited

Walter Scott vs. MSCI EAFE  
Excess Returns Since Inception (December 1993)<sup>1</sup> – March 31, 2011

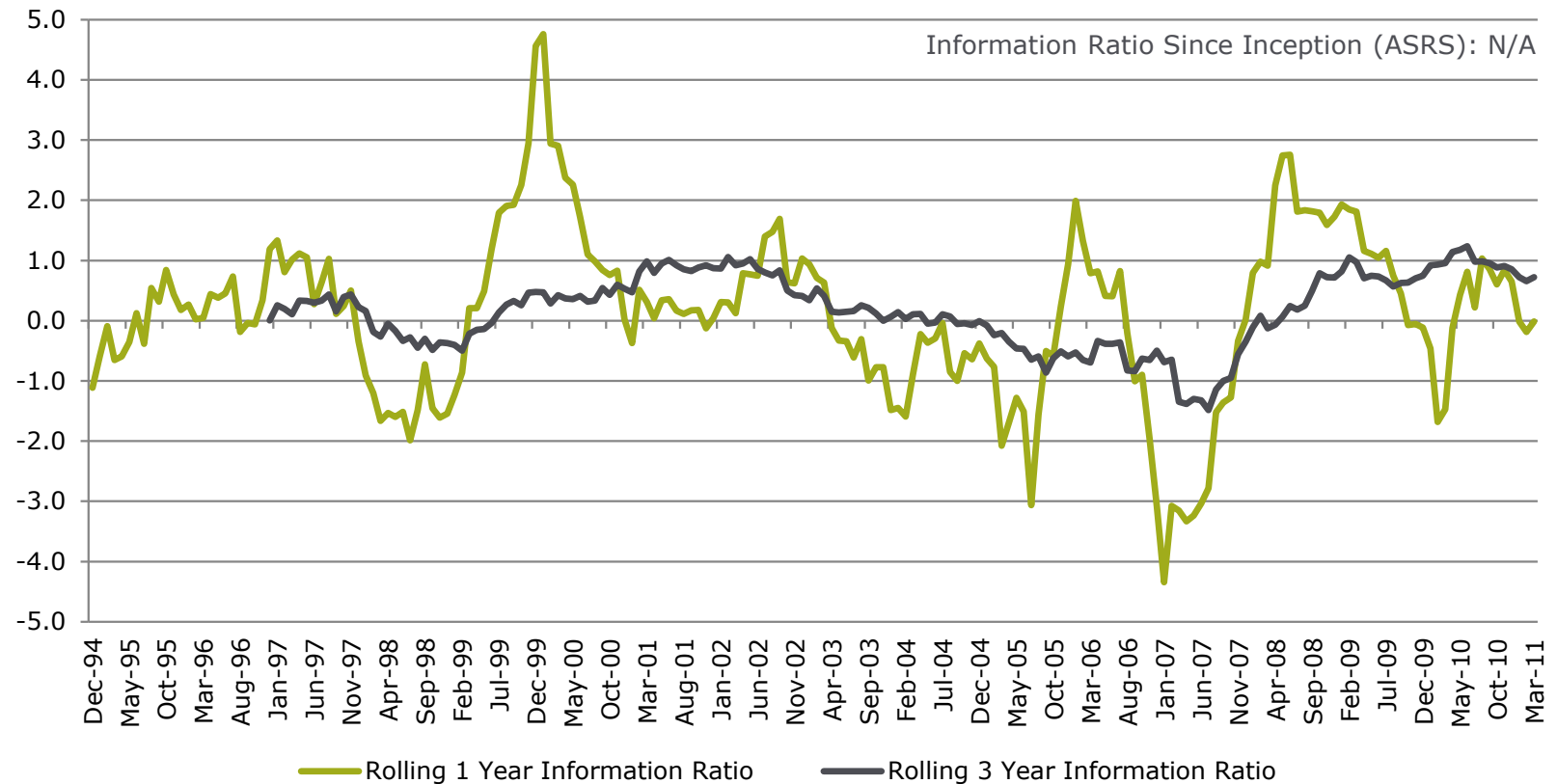


<sup>1</sup>Net of fee performance of the Walter Scott EAFE/International Composite is presented in the chart above. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is March 31, 2011.

*Note: Based on monthly, net of fee performance data, since inception.*

# Walter Scott & Partners Limited

## Walter Scott vs. MSCI EAFE Information Ratios Since Inception (December 1993)<sup>1</sup> – March 31, 2011



<sup>1</sup>Net of fee performance of the Walter Scott EAFE/International Composite is presented in the chart above. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is March 31, 2011.

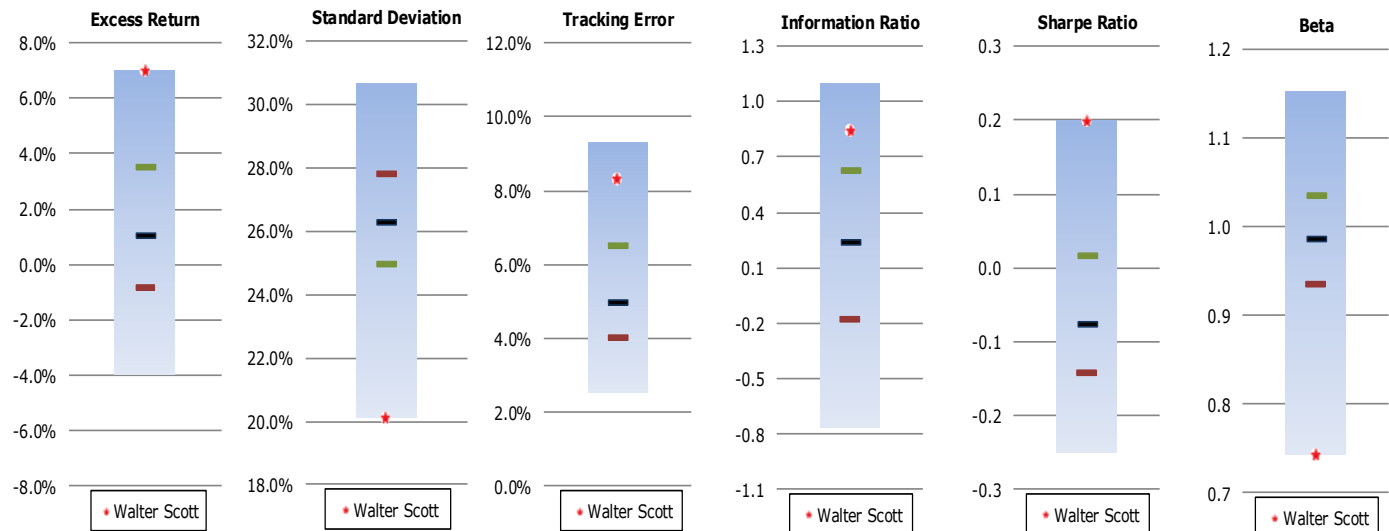
*Note: Based on monthly, net of fee performance data, since inception.*

# Walter Scott & Partners Limited

## Walter Scott vs. MSCI EAFE

### Risk and Return Characteristics vs. International Large Cap Equity Universe

For the three-year period ending March 31, 2011<sup>1</sup>



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
Walter Scott	7.0%	20.1%	8.3%	0.8	0.2	0.7
Rank	3	2	9	14	2	98
5th Percentile	6.6%	22.2%	9.3%	1.1	0.1	1.2
Upper Quartile	3.5%	25.0%	6.5%	0.6	0.0	1.0
Median	1.1%	26.3%	5.0%	0.2	-0.1	1.0
Lower Quartile	-0.9%	27.8%	4.0%	-0.2	-0.1	0.9
95th Percentile	-3.9%	30.6%	2.5%	-0.8	-0.3	0.8
Observations	284	284	284	284	284	284

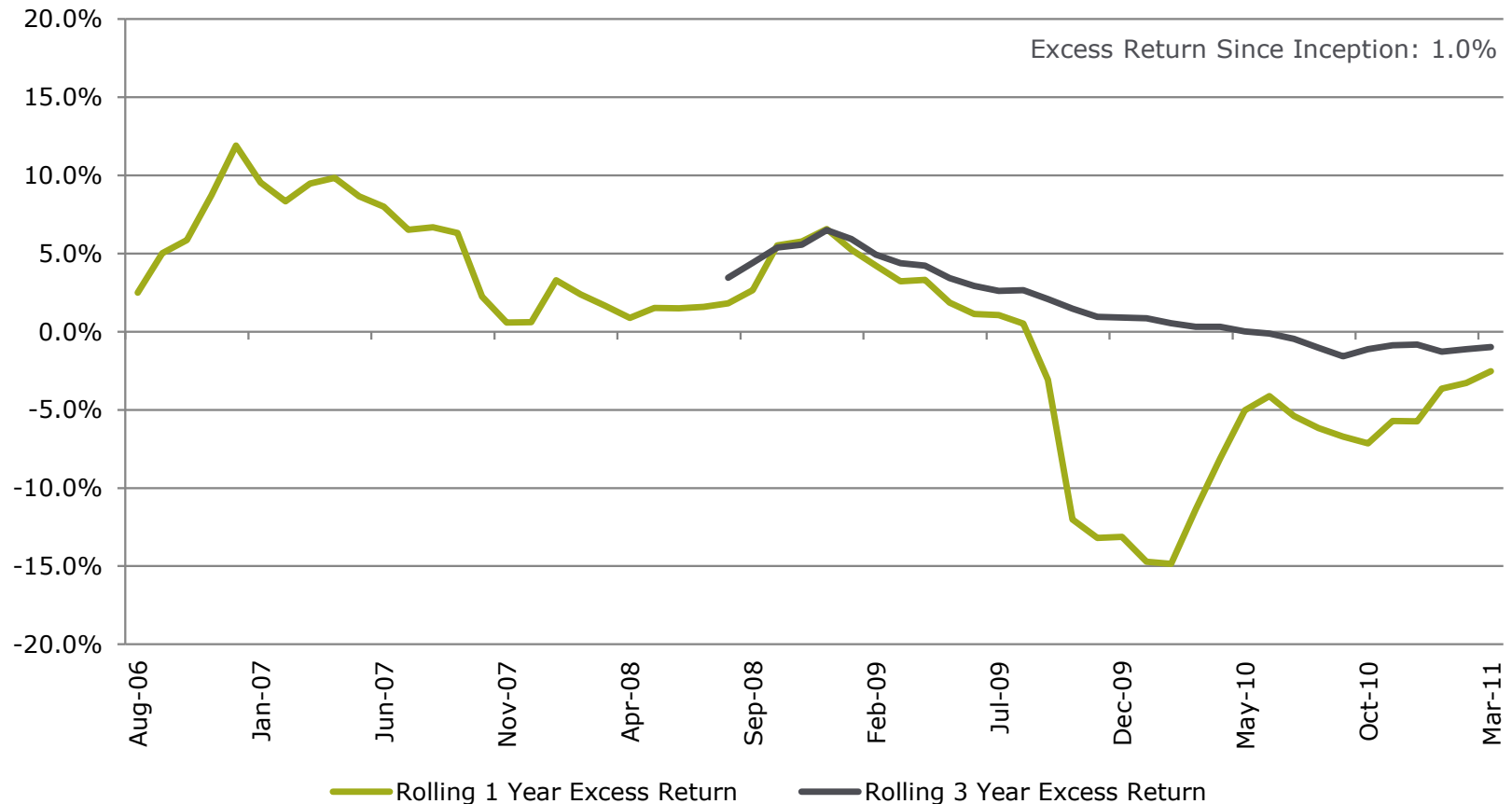
<sup>1</sup>Gross of fee performance of the Walter Scott EAFE/International Composite is presented in the chart above. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is March 31, 2011.  
Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of March 31, 2011.

## Dimensional Fund Advisors, L.P.

Factors	Description
People	<ul style="list-style-type: none"><li>•Team approach where no one individual is solely responsible for a strategy or account.</li><li>•Stable team, low turnover among investment professionals.</li><li>•Research group plays a critical role in DFA's strategy and execution.</li><li>•Strong ties to the academic world.</li></ul>
Philosophy	<ul style="list-style-type: none"><li>•Believe markets work: risk and return are related. Believe greater exposure to three factors: equity exposure, company size and company price, should result in a higher portfolio expected return.</li></ul>
Process	<ul style="list-style-type: none"><li>•Eligible securities are those in countries included in the MSCI EAFE Small Cap Index and Canada that are also above \$50 million in market capitalization.</li><li>•Eligible securities are identified through screens for market capitalization (smallest 10-15%), book-to-market (top 30%), eligibility (no regulated utilities, recent IPOs, etc.), and trading (buy, hold, sell ranges) on a country-by-country basis.</li><li>•DFA uses trading to gain a liquidity advantage to generate incremental returns.</li><li>•The final portfolio is well diversified, typically holding more than 500 securities.</li></ul>

# Dimensional Fund Advisors, L.P.

DFA vs. MSCI EAFE Small Cap  
Excess Returns Since Inception (August 2005) – March 31, 2011

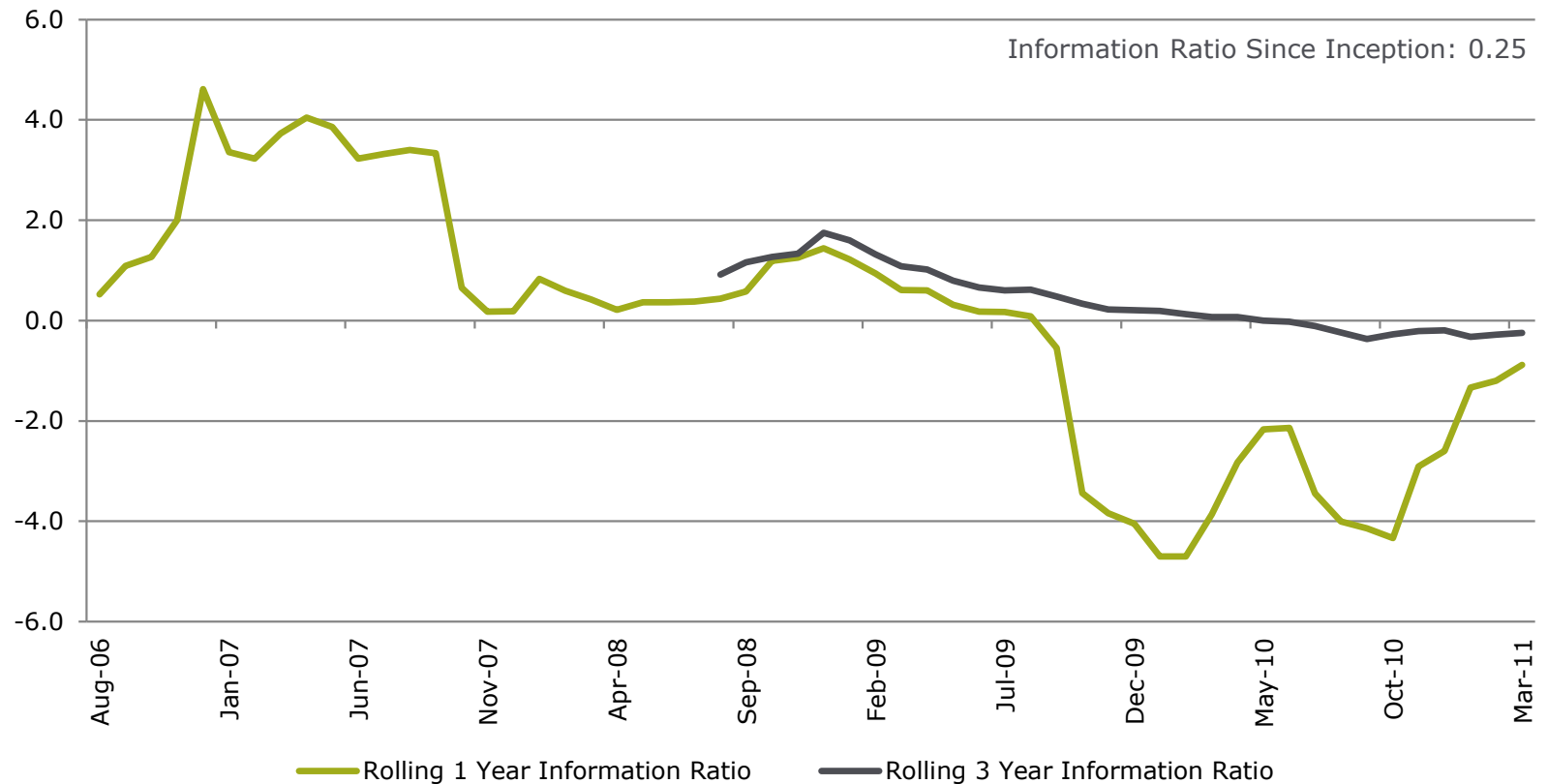


*Note: Based on monthly, net of fee performance data, since inception.*



# Dimensional Fund Advisors, L.P.

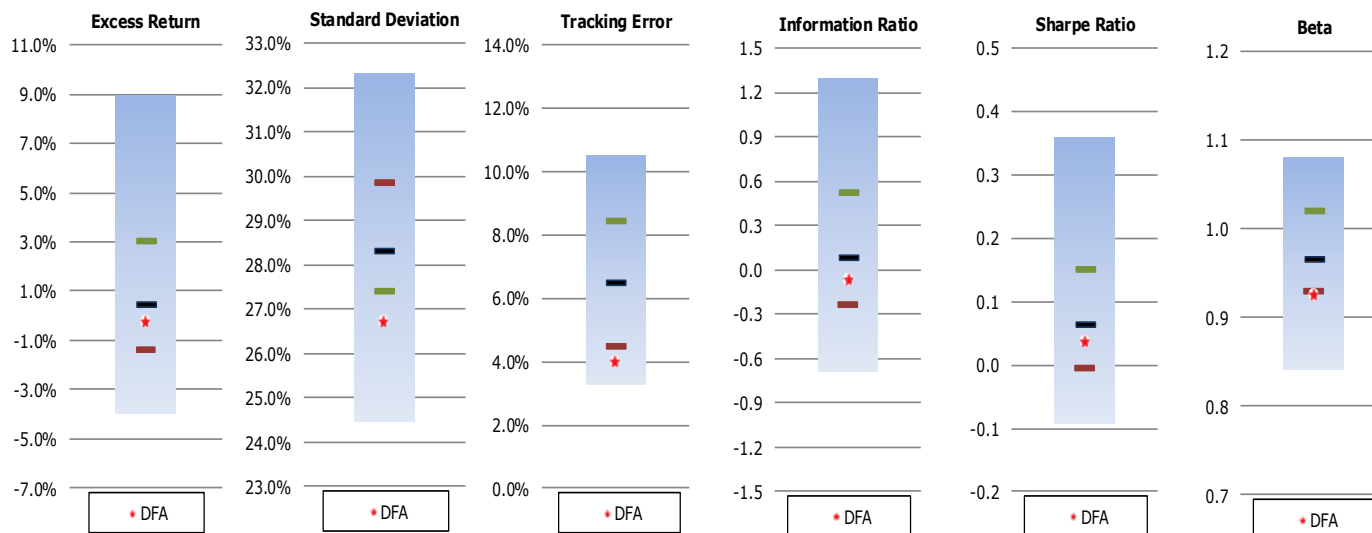
## DFA vs. MSCI EAFE Small Cap Information Ratios Since Inception (August 2005) – March 31, 2011



*Note: Based on monthly, net of fee performance data, since inception.*

# Dimensional Fund Advisors, L.P.

## DFA vs. MSCI EAFE Small Cap Risk and Return Characteristics vs. Int'l Small Cap Equity Universe For the three-year period ending March 31, 2011



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
DFA	-0.3%	26.7%	4.0%	-0.1	0.0	0.9
Rank	59	17	89	60	59	75
5th Percentile	8.9%	24.5%	10.5%	1.3	0.4	1.1
Upper Quartile	3.1%	27.4%	8.5%	0.5	0.2	1.0
<b>Median</b>	<b>0.5%</b>	<b>28.3%</b>	<b>6.5%</b>	<b>0.1</b>	<b>0.1</b>	<b>1.0</b>
Lower Quartile	-1.4%	29.8%	4.5%	-0.2	0.0	0.9
95th Percentile	-4.0%	32.3%	3.3%	-0.7	-0.1	0.8
Observations	76	76	76	76	76	76

*Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of March 31, 2011.*

# Franklin Templeton Investments

Factors	Description
People	<ul style="list-style-type: none"> <li>•Dedicated Global Small Cap team of 5 investment professionals focused only on smaller cap stocks.</li> <li>•Ed Lugo, II, CFA – Portfolio Manager/Analyst, works with 4 additional analysts. Average of 10 years experience.</li> <li>•Access to broader Franklin Equity Group - 70+ professionals including Global Large Cap and European Equity teams.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>•Believe a concentrated, yet diversified portfolio of high-quality companies has the potential to produce above-average risk-adjusted returns over the longer term. The strategy seeks companies that are attractive from three views:</li> <li>•Growth – a clear competitive advantage with the potential for sustainable growth and strong absolute returns over the longer term.</li> <li>•Quality – strong balance sheets and free cash flow supported by a management team focused on shareholder value.</li> <li>•Valuation – process includes rigorous valuation analysis to select companies that are attractively priced.</li> </ul>
Process	<ul style="list-style-type: none"> <li>•Bottom-up, research-driven approach focused on building a concentrated portfolio of companies (25-45) that meet the portfolio's investment criteria with minimal downside risk. Fundamental research is the core driver of portfolio construction, with over 90% of research generated in-house.</li> <li>•Identify Ideas and Review Key Attributes – qualitative and quantitative means to identify companies with a market capitalization between \$100M and \$5B that they believe have sustainable competitive advantages and the potential to produce a minimum 10% return over a five-year period.</li> <li>•In-depth Fundamental Analysis – with a long-term investment horizon, intense, bottom-up analysis is the most crucial aspect of the investment process. Analysts may spend 4-8 weeks deeply investigating a company, as well as its industry and competitors, from many angles against the growth, quality and valuation investment criteria.</li> <li>•Formal Rating &amp; Inclusion in Portfolios – strict buy and sell targets; 25-45 holdings; no more than 35% in one industry at investment; no more than 10% in one company at market value; no more than 10% in Emerging Markets securities.</li> </ul>

# Franklin Templeton Investments

Franklin Templeton vs. MSCI EAFE Small Cap  
Excess Returns Since Inception (November 2002)<sup>1</sup> – March 31, 2011

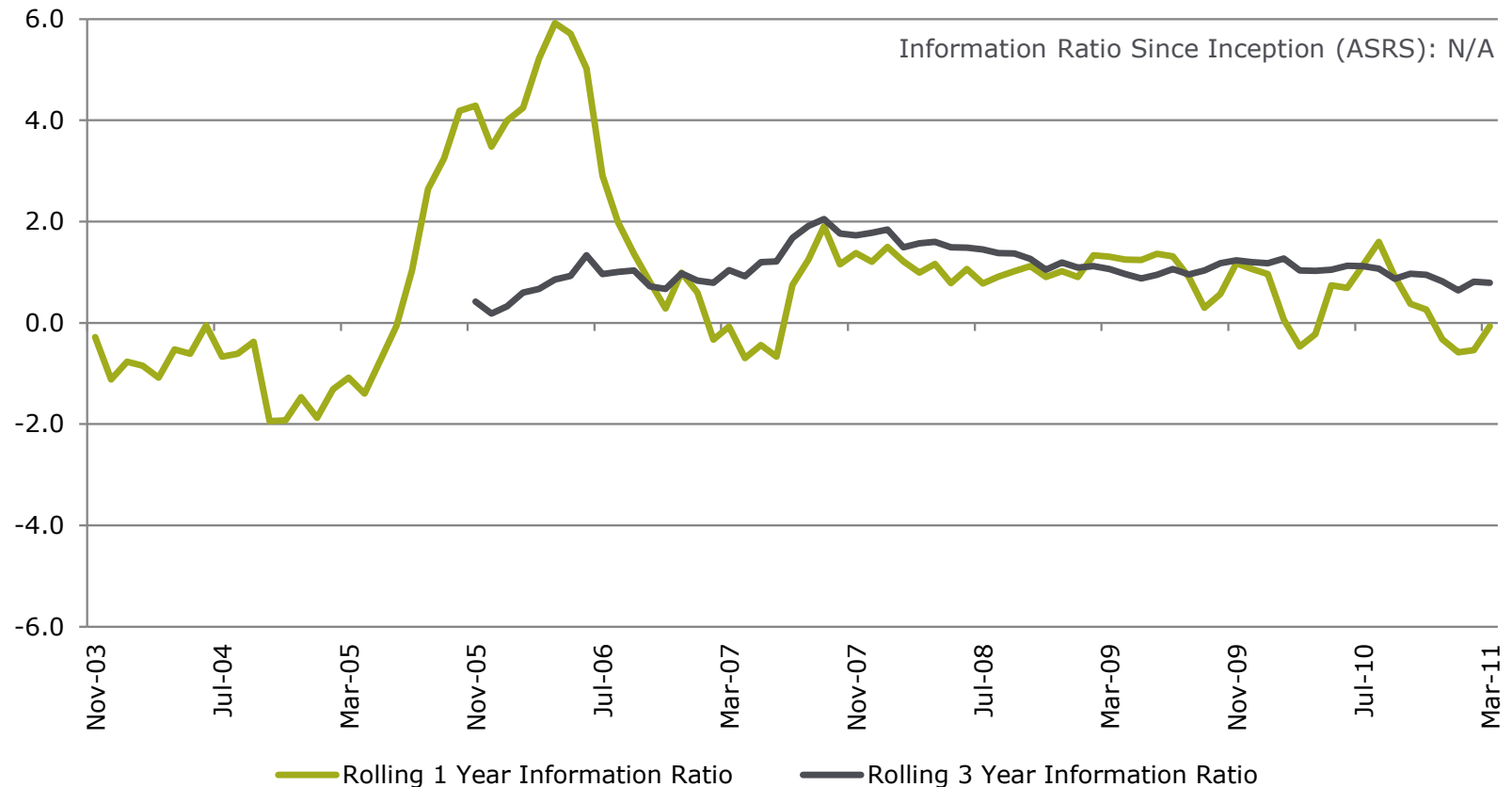


<sup>1</sup>Net of fee performance of the Franklin Templeton Franklin International Small Cap Growth Equity Composite is presented in the chart above. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is March 31, 2011.

Note: Based on monthly, net of fee performance data, since inception.

# Franklin Templeton Investments

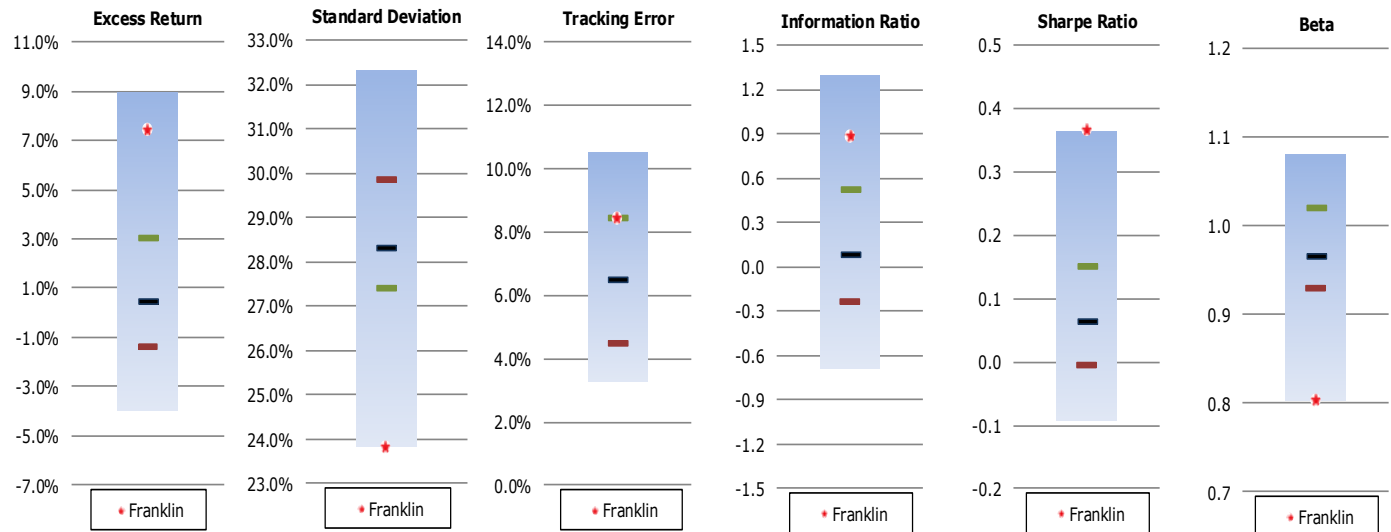
Franklin Templeton vs. MSCI EAFE Small Cap  
Information Ratios Since Inception (November 2002)<sup>1</sup> – March 31, 2011



<sup>1</sup>Net of fee performance of the Franklin Templeton Franklin International Small Cap Growth Equity Composite is presented in the chart above. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is March 31, 2011.  
Note: Based on monthly, net of fee performance data, since inception.

# Franklin Templeton Investments

## Franklin Templeton vs. MSCI EAFE Small Cap Risk and Return Characteristics vs. Int'l Small Cap Equity Universe For the three-year period ending March 31, 2011<sup>1</sup>



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
Franklin Rank	7.4% 9	23.8% 5	8.4% 26	0.9 13	0.4 2	0.8 93
5th Percentile	8.9%	24.5%	10.5%	1.3	0.4	1.1
Upper Quartile	3.1%	27.4%	8.5%	0.5	0.2	1.0
Median	<b>0.5%</b>	<b>28.3%</b>	<b>6.5%</b>	<b>0.1</b>	<b>0.1</b>	<b>1.0</b>
Lower Quartile	-1.4%	29.8%	4.5%	-0.2	0.0	0.9
95th Percentile	-4.0%	32.3%	3.3%	-0.7	-0.1	0.8
Observations	76	76	76	76	76	76

<sup>1</sup>Gross of fee performance of the Franklin Templeton Franklin International Small Cap Growth Equity Composite is presented in the chart above. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is March 31, 2011.

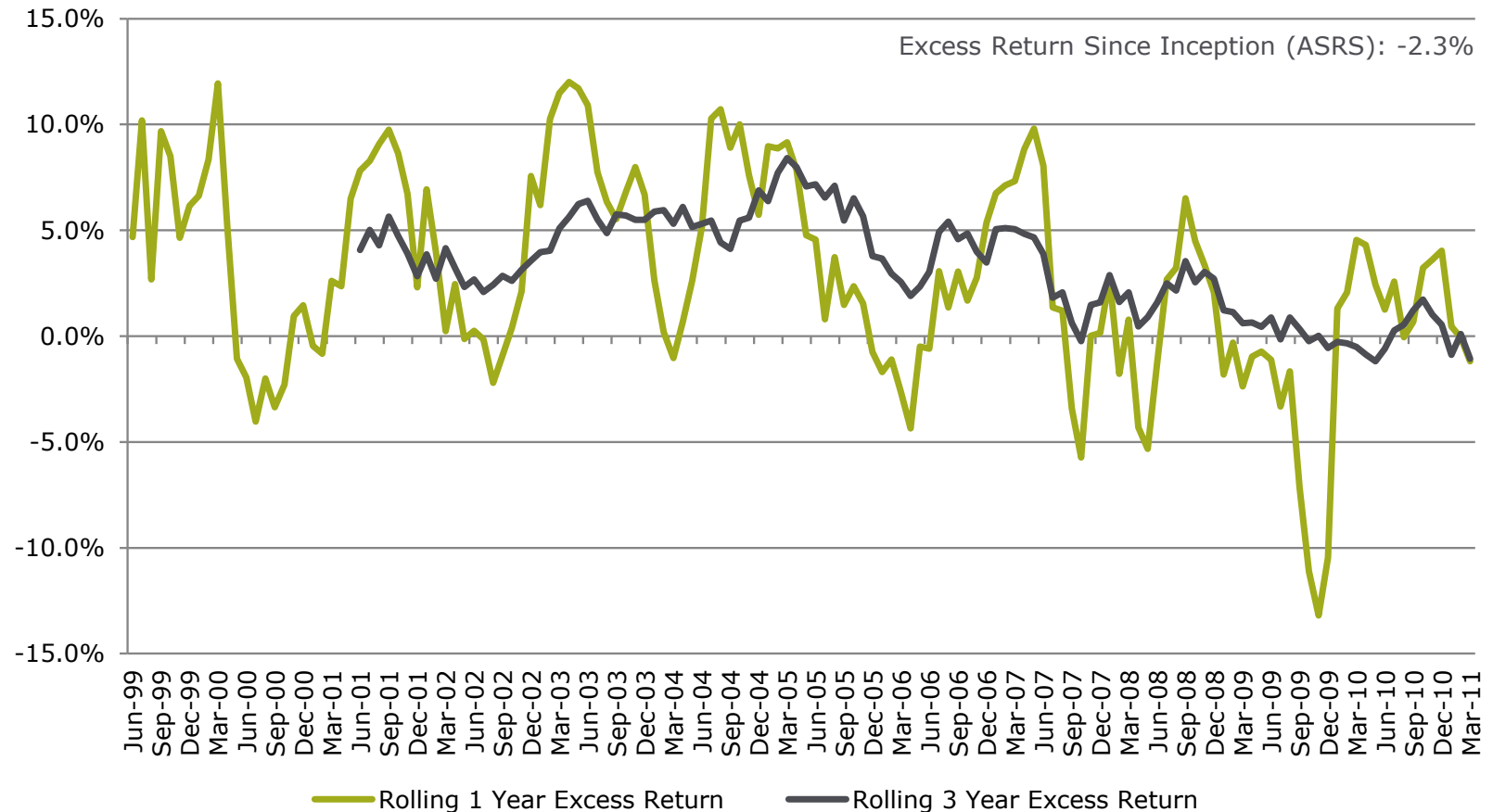
Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of March 31, 2011.

# Eaton Vance Management

Factors	Description
People	<ul style="list-style-type: none"> <li>•Parametric Structured Emerging Markets Team – 13 year average investment experience; 7 years average experience with team; specialists in structured equity portfolio management. Key team members include: <ul style="list-style-type: none"> <li>•David Stein, Ph.D., Chief Investment Officer</li> <li>•Thomas Seto, Managing Director – Portfolio Management</li> <li>•Jodi Wong, Director – Emerging Markets Portfolio Management</li> <li>•Lee Thacker, CFA, Director of Trading</li> <li>•Paul Bouchey, CFA, Director of Research</li> <li>•Vassilii Nemtchinov, Ph.D., Manager of Applied Research</li> </ul> </li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>•Parametric seeks broad exposure to the emerging markets equity asset class with less risk and higher return versus capitalization weighted indices.</li> <li>•This approach takes advantage of the low correlations of emerging markets to reduce risk, diversifies the portfolio through an emphasis on smaller countries vs. indices, and utilizes a rebalancing process that exploits price reversals.</li> </ul>
Process	<ul style="list-style-type: none"> <li>•The strategy employs a top-down, rules-based approach that emphasizes broad exposure and diversification among emerging and frontier market countries, economic sectors and individual issuers.</li> <li>•The country selection process is driven by a tiered approach in which countries are equally weighted within four tiers based upon market capitalization and liquidity.</li> <li>•Within each country, the team seeks to ensure broad sector exposure to all major economic activities and seeks to weight each sector group more equally. Currently, the team’s target model maintains exposure to 44 emerging and frontier countries across the globe.</li> <li>•At the security level, the team takes a more passive approach, focusing on capturing the systematic return of each country by investing in companies that offer sufficient size and liquidity.</li> <li>•Within each country, the team seeks to diversify sector exposure, and often holds more than 1,500 securities, focusing on companies that service as strong representatives of economic activity with weights based upon relative capitalization.</li> <li>•A highly controlled rebalancing discipline systematically reduces concentration risk while also capturing profits as a consequence of both country volatility and low cross-correlations within the asset class.</li> </ul>

# Eaton Vance Management

Eaton Vance vs. MSCI Emerging Markets  
Excess Returns Since Inception (June 1998)<sup>1</sup> – March 31, 2011

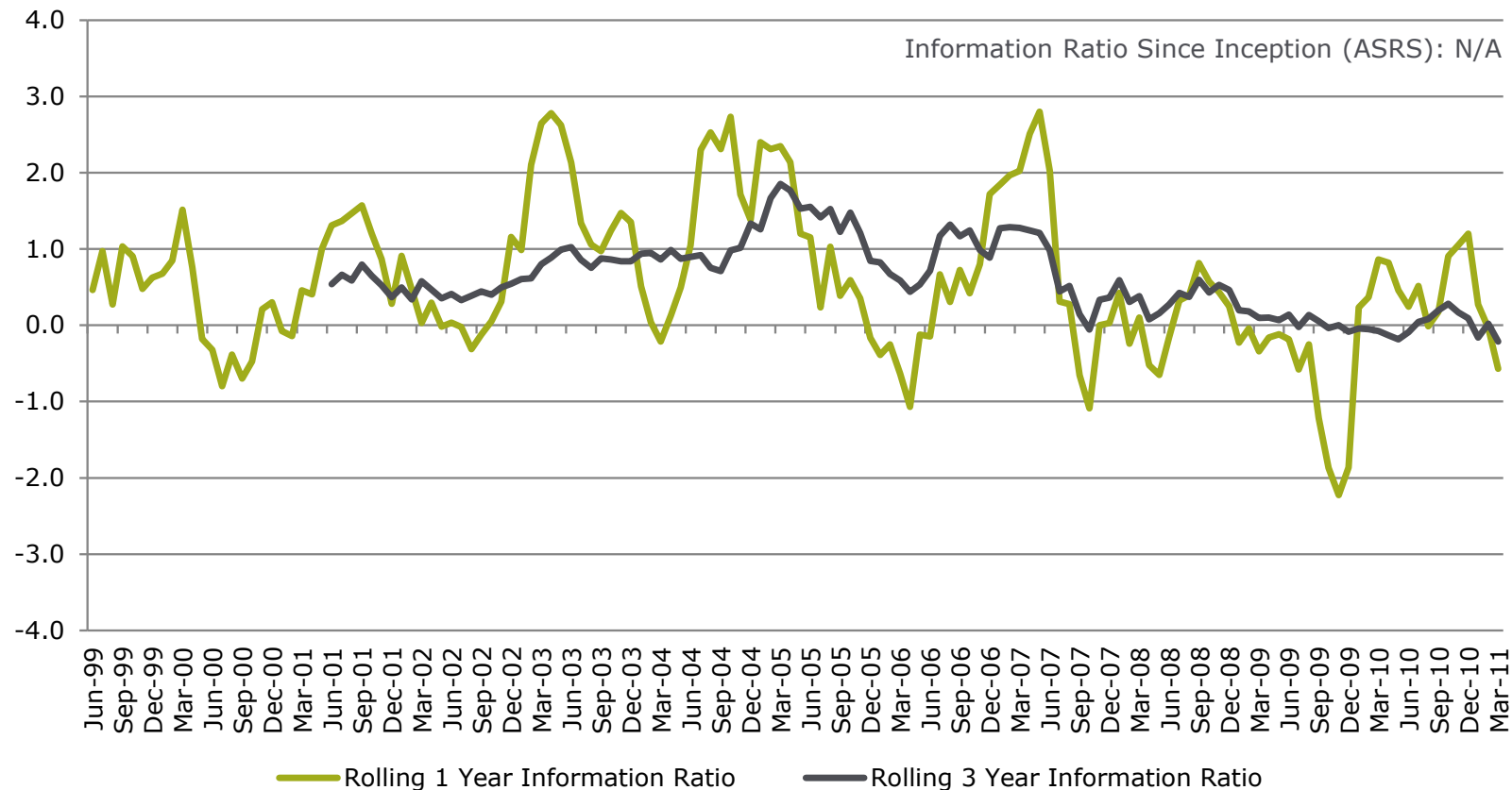


<sup>1</sup>Net of fee performance of the Eaton Vance Structured Emerging Markets Equity Composite is linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is November 30, 2010.  
Note: Based on monthly, net of fee performance data, since inception.



# Eaton Vance Management

## Eaton Vance vs. MSCI Emerging Markets Information Ratios Since Inception (June 1998)<sup>1</sup> – March 31, 2011



<sup>1</sup>Net of fee performance of the Eaton Vance Structured Emerging Markets Equity Composite is linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is November 30, 2010.

Note: Based on monthly, net of fee performance data, since inception.

# Eaton Vance Management

## Eaton Vance vs. MSCI Emerging Markets Risk and Return Characteristics vs. Emerging Markets Equity Universe For the three-year period ending March 31, 2011<sup>1</sup>



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
Eaton Vance	-0.2%	30.5%	5.1%	0.0	0.1	0.9
Rank	55	22	44	57	50	78
5th Percentile	8.8%	26.0%	15.6%	1.3	0.4	1.1
Upper Quartile	3.2%	31.0%	7.5%	0.6	0.2	1.0
Median	0.0%	32.2%	4.6%	0.1	0.1	1.0
Lower Quartile	-2.4%	33.7%	3.7%	-0.4	0.1	1.0
95th Percentile	-6.3%	37.0%	2.6%	-1.0	-0.1	0.8
Observations	183	183	183	183	183	183

<sup>1</sup>Gross of fee performance of the Eaton Vance Structured Emerging Markets Equity Composite is linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is November 30, 2010.

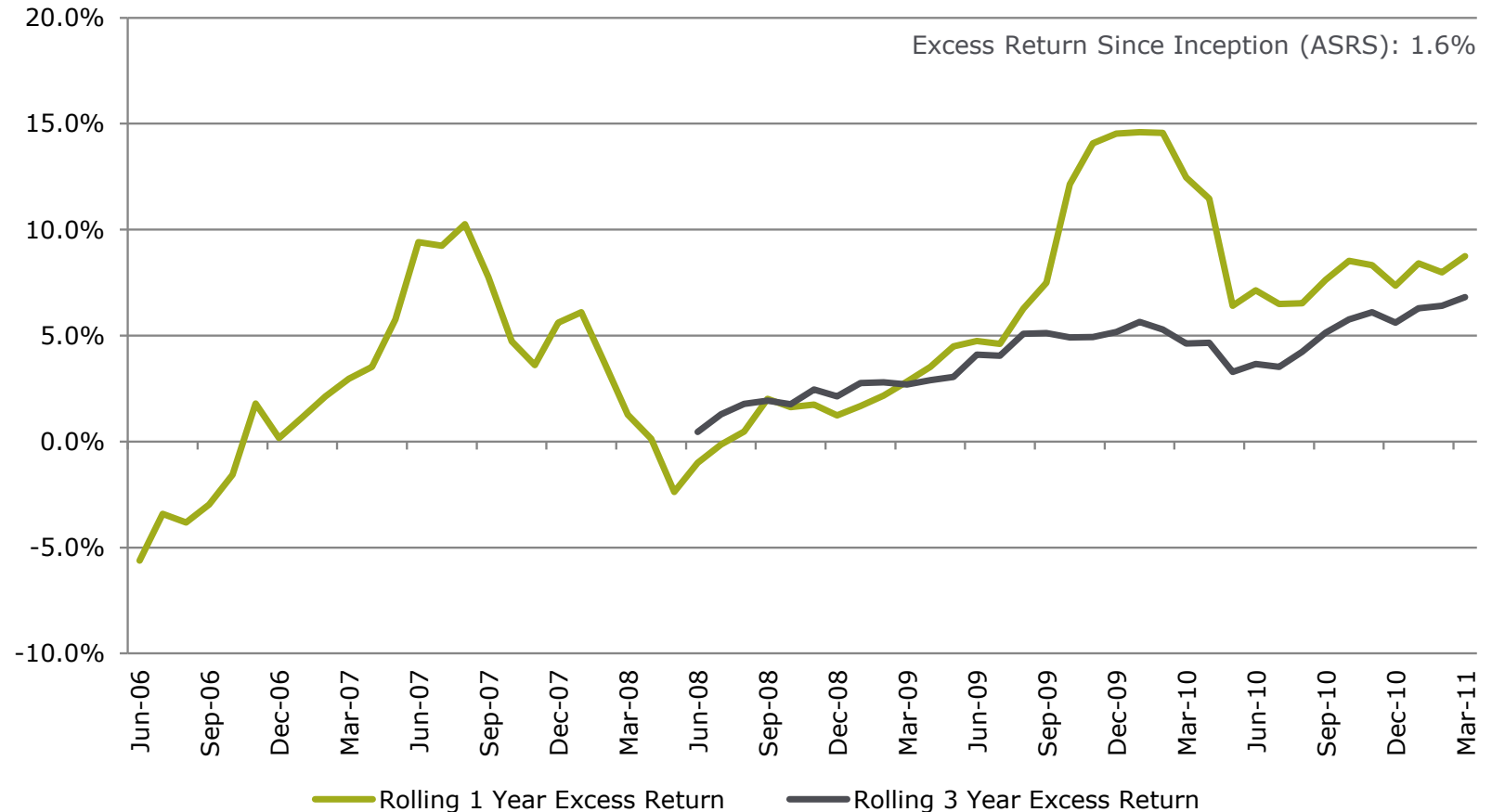
Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of March 31, 2011.

# LSV Asset Management

Factors	Description
People	<ul style="list-style-type: none"><li>•No turnover in investment management team.</li><li>•The same team of academics and quantitative analysts is responsible for managing all value equity portfolios.</li></ul>
Philosophy	<ul style="list-style-type: none"><li>•Based on original academic research in behavioral finance, LSV believes markets are inefficient as investors tend to extrapolate past performance too far into the future. They also believe that investors are slow to change their “mindset” about a company.</li></ul>
Process	<ul style="list-style-type: none"><li>•Quantitative approach ranks stocks on fundamental measures of value, past performance and indicators of near-term potential.</li><li>•Stocks are ranked by country and LSV does not take material country bets versus benchmark.</li><li>•Portfolio is optimized to ensure the portfolio is broadly diversified across industries and companies.</li><li>•Control tracking error relative to the benchmark by maintaining strict buy/sell criteria.</li><li>•Deep value orientation.</li><li>•The competitive strength of this strategy is that it avoids introducing to the process any judgmental biases and behavioral weaknesses that often influence investment decisions.</li></ul>

# LSV Asset Management

## LSV vs. MSCI Emerging Markets Excess Returns Since Inception (June 2005)<sup>1</sup> – March 31, 2011

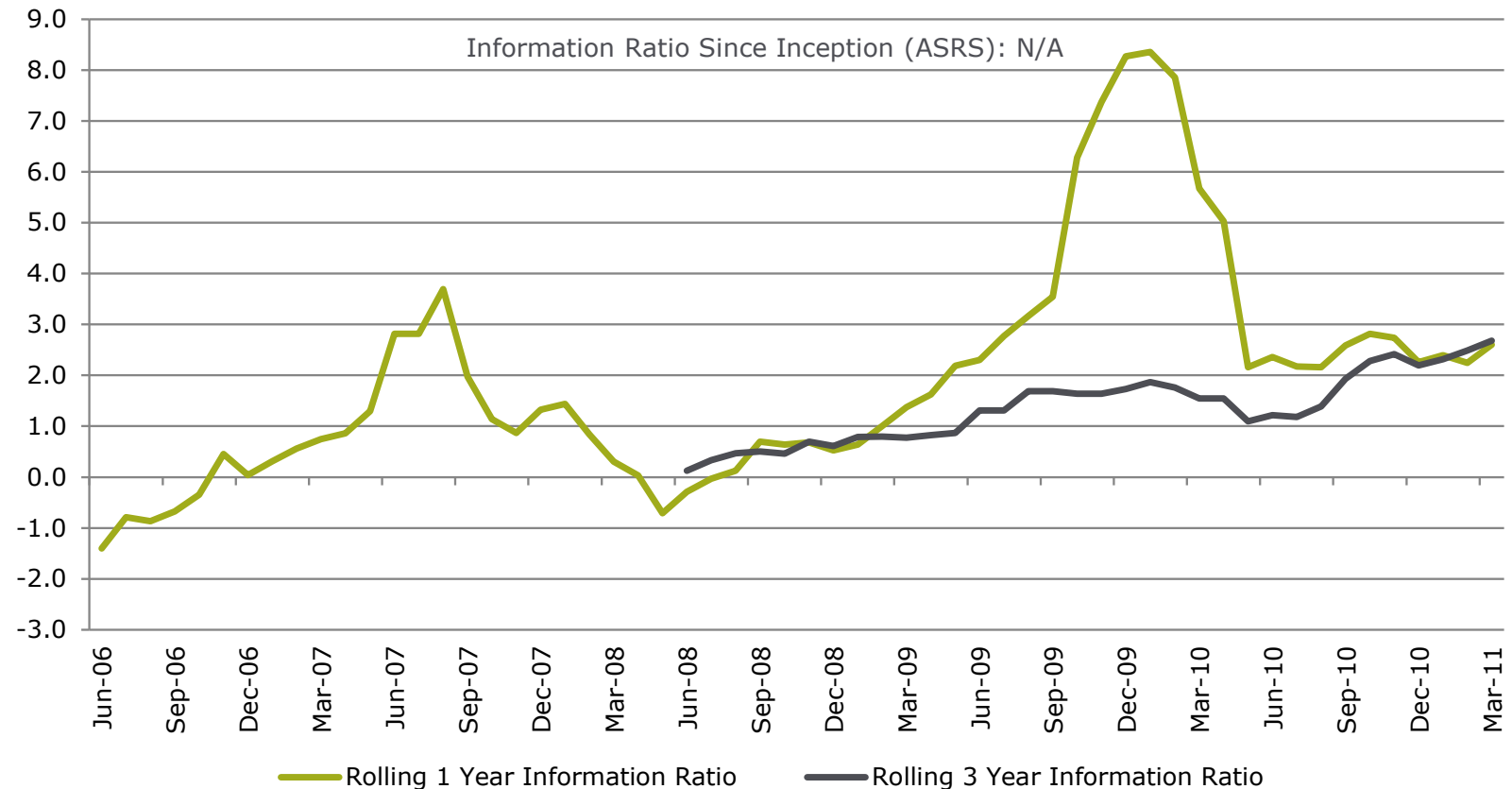


<sup>1</sup>Net of fee performance of the LSV Emerging Markets Value Equity Composite is linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is November 30, 2010.

*Note: Based on monthly, net of fee performance data, since inception.*

# LSV Asset Management

## LSV vs. MSCI Emerging Markets Information Ratios Since Inception (June 2005)<sup>1</sup> – March 31, 2011



<sup>1</sup>Net of fee performance of the LSV Emerging Markets Value Equity Composite is linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is November 30, 2010.

*Note: Based on monthly, net of fee performance data, since inception.*

# LSV Asset Management

## LSV vs. MSCI Emerging Markets Risk and Return Characteristics vs. Emerging Markets Equity Universe For the three-year period ending March 31, 2011<sup>1</sup>



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
LSV	7.8%	32.0%	2.6%	3.0	0.4	1.0
Rank	6	47	94	1	9	50
5th Percentile	8.8%	26.0%	15.6%	1.3	0.4	1.1
Upper Quartile	3.2%	31.0%	7.5%	0.6	0.2	1.0
<b>Median</b>	<b>0.0%</b>	<b>32.2%</b>	<b>4.6%</b>	<b>0.1</b>	<b>0.1</b>	<b>1.0</b>
Lower Quartile	-2.4%	33.7%	3.7%	-0.4	0.1	1.0
95th Percentile	-6.3%	37.0%	2.6%	-1.0	-0.1	0.8
Observations	183	183	183	183	183	183

<sup>1</sup>Gross of fee performance of the LSV Emerging Markets Value Equity Composite is linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is November 30, 2010.

Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of March 31, 2011.

# William Blair & Company, LLC

Factors	Description
People	<ul style="list-style-type: none"> <li>•William Blair is an employee owned full line investment firm. It was founded in Chicago in 1935 for the purpose of identifying fast growing, high quality companies and providing these companies with investment banking services.</li> <li>•Jeff Urbina and Todd McClone, Principal, currently manage the Emerging Markets strategy and have eleven research analysts, who are organized by sector, supporting the strategy. All investment professionals are located in the Chicago office.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>•William Blair has a quality growth philosophy wherein they believe that certain companies can achieve long term success because of intrinsic characteristics they possess such as discipline, focus, culture and continuity which can drive sustainable superior returns and growth in dividends and earnings.</li> </ul>
Process	<ul style="list-style-type: none"> <li>•William Blair's investment process incorporates a combination of quantitative and qualitative factors which identify companies that can grow earnings above market trends for longer periods of time.</li> <li>•Quantitative screens are used to identify companies within a universe of 10,000 investable names as candidates that have attractive quality growth characteristics.</li> <li>•Companies that make it through this first screen are placed on an Eligibility List/Research Database and are assigned to analysts who are responsible for company visits and more in depth review.</li> <li>•From the Eligibility List, a weekly focus list or "Research Agenda" is developed, which identifies potential buy/sell candidates. These names are the highest priority companies from the perspective of the portfolio managers or analysts and have become potential candidates as a result of either quantitative or thematic analysis.</li> <li>•After a vigorous vetting process, candidates on the Research Agenda are added to the portfolio, sold from the portfolio, or dropped from the Research Agenda.</li> </ul>

# William Blair & Company, LLC

## William Blair vs. MSCI Emerging Markets Excess Returns Since Inception (September 1999)<sup>1</sup> – March 31, 2011

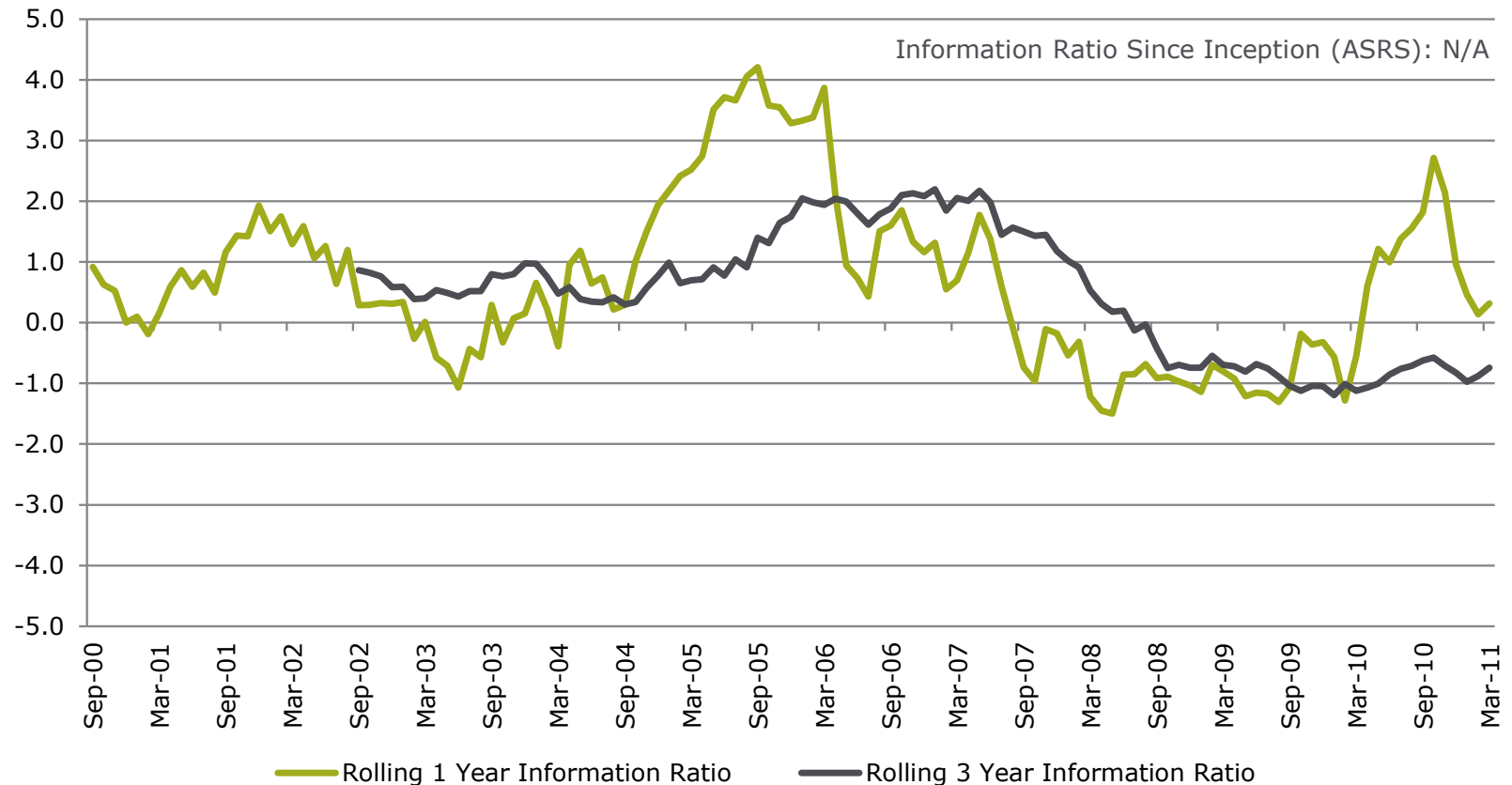


<sup>1</sup>Net of fee performance of the William Blair International Growth Emerging Markets Composite is linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is October 31, 2010.  
Note: Based on monthly, net of fee performance data, since inception.



# William Blair & Company, LLC

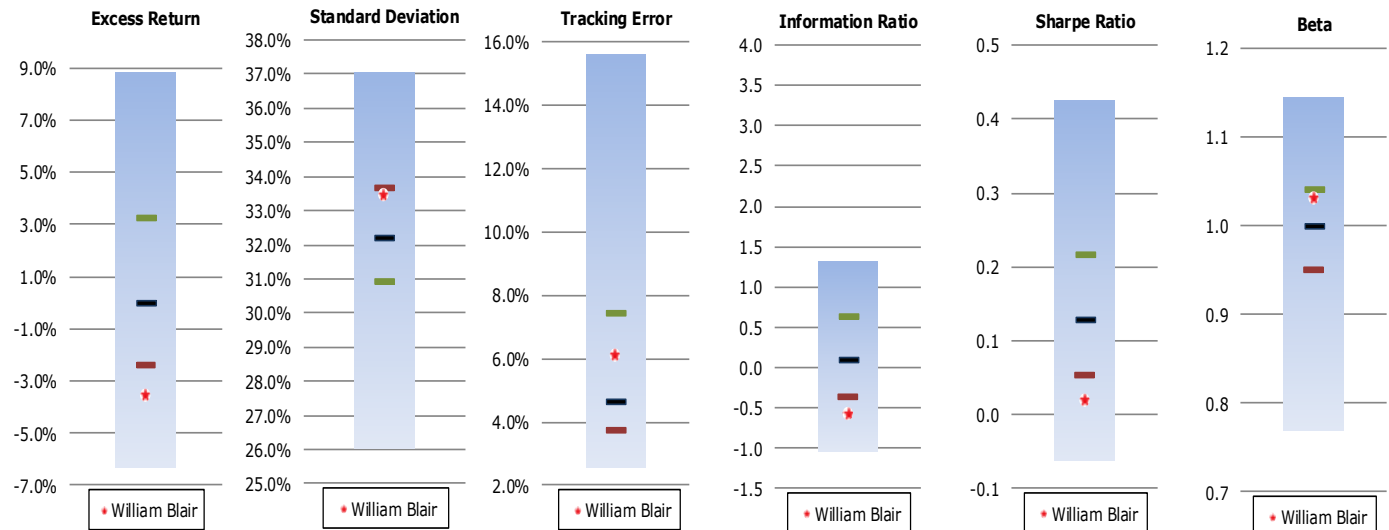
## William Blair vs. MSCI Emerging Markets Information Ratios Since Inception (September 1999)<sup>1</sup> – March 31, 2011



<sup>1</sup>Net of fee performance of the William Blair International Growth Emerging Markets Composite is linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is October 31, 2010.  
*Note: Based on monthly, net of fee performance data, since inception.*

# William Blair & Company, LLC

## William Blair vs. MSCI Emerging Markets Risk and Return Characteristics vs. Emerging Markets Equity Universe For the three-year period ending March 31, 2011<sup>1</sup>



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
William Blair	-3.6%	33.5%	6.1%	-0.6	0.0	1.0
Rank	85	74	36	82	85	48
5th Percentile	8.8%	26.0%	15.6%	1.3	0.4	1.1
Upper Quartile	3.2%	31.0%	7.5%	0.6	0.2	1.0
<b>Median</b>	<b>0.0%</b>	<b>32.2%</b>	<b>4.6%</b>	<b>0.1</b>	<b>0.1</b>	<b>1.0</b>
Lower Quartile	-2.4%	33.7%	3.7%	-0.4	0.1	1.0
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# Information Disclosure

- **These materials contain summary information regarding the investment management approaches described herein and are not a complete description of the investment objectives, policies, guidelines or portfolio management and research that supports these approaches. This analysis does not constitute a recommendation to implement any of the aforementioned approaches. The information has been obtained from sources NEPC believes to be reliable, but we cannot guarantee its accuracy or completeness.**
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